

Everyday Math - Curriculum Map

Goodridge Elementary 5th grade – (2006-2007)

Timeline:

- Unit 1 – Mid August – Mid September (Aug 27 – Sep 14)
- Unit 2 - Mid September – Beginning of October (Sep 17 – Oct 5)
- Unit 4 – Late October to Mid November (Oct 29 – Nov 16)
- Unit 5 – Late November to Mid December (Nov 19 – Dec 14)
- Unit 6 – Late December to Late January (Dec 17 – Jan 25)
- Unit 12 – Incorporate in with Unit 1

<u>Program of Studies:</u> <u>Big Idea</u>	<u>Program of Studies: Skills and Concepts</u>	<u>Related Core Content for Assessment (DOK)</u>	<u>Resources/ Activities</u>	<u>Assessment</u>	<u>Vocabulary</u>
<p>Big Idea: Number Properties and Operations Whole number sense and addition and subtraction are key concepts and skills developed in early childhood. Students build on their number sense and counting sense to develop multiplication and division. They move flexibly and fluently through basic number facts, operations and representations. Their</p>	<p>MA-5-NPO-S-NS4 Students will explore the use of simple ratios to describe problem situations.</p> <p>MA-5-NPO-S-NS5 Students will explore, investigate, compare, relate and apply relationships among whole numbers, fractions, decimals and percents.</p>	<p>MA-05-1.1.1 Students will:</p> <ul style="list-style-type: none"> • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to represent whole numbers (0 to 99,999,999); • apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, 	<p>(NS4) Unit 12 – Probability, Ratios, and Rates and Unit 8 – Fractions and Ratios</p> <p>(NS5) Unit 5 – Fractions, Decimals, and Percents</p> <p>NS6) Unit 5 - Fractions, Decimals, and Percents</p>	<p>Checking Progress Unit Tests</p> <p>Study Links</p> <p>Math Boxes</p> <p>Exit Slips</p>	<p style="text-align: center;"><u>Unit 1</u></p> <ul style="list-style-type: none"> • Rectangular array • Number model • Even number • factor • odd number • remainder • divisible by • quotient • composite

<p>understanding of the base-10 number system expands to include decimals. They examine various meanings and models of fractions. They explore data, perform measurements and examine patterns as part of the development process for number and operations, using other mathematics strands to enrich number. Elementary number encompasses computational fluency with whole numbers, relationships between decimals and fractions and techniques for reasonable estimations.</p>	<p>MA-5-NPO-S-NS6 Students will read, write, identify and compare decimals through ten-thousandths.</p> <p>MA-5-NPO-S-NO1 Students will develop and apply computational procedures to add, subtract, multiply and divide whole numbers using basic facts and technology as appropriate.</p> <p>MA-5-NPO-S-NO2 Students will add and subtract fractions with common denominators using manipulatives or symbolic notation.</p> <p>MA-5-NPO-S-NO4 Students will extend multiplication to include one decimal place.</p> <p>MA-5-NPO-S-NO5 Students will explore the effects of operations on</p>	<p>symbols) to describe commonly-used fractions, mixed numbers and decimals through thousandths;</p> <ul style="list-style-type: none"> • apply these numbers to represent real-world problems and • explain how the base-10 number system relates to place value. <p style="text-align: right;">DOK 2</p> <p><i>MA-05-1.1.2</i> <i>Students will read, write and rename whole numbers, fractions and decimals, and apply to real-world and mathematical problems.</i></p> <p>MA-05-1.1.3 Students will compare (<, >, =) and order whole numbers), fractions and decimals, and explain the relationships (equivalence, order) between and among them.</p> <p style="text-align: right;">DOK 2</p> <p><i>MA-05-1.3.2</i> <i>Students will skip-count</i></p>	<p>(NO1) Unit 4 – Division, daily math boxes, and daily mad minutes</p> <p>(NO2) – Unit 6 – Addition and Subtraction of Fractions</p> <p>(NO4) – Unit 2 – 2.8 – Multiplication of whole numbers and decimals</p> <p>(NO5)Continuous throughout lessons</p> <p>(PN04) Unit 1 – Number Theory, Unit 2 – Estimation</p>	<p>number</p> <ul style="list-style-type: none"> • prime number • square number • exponent • square root • factor string • prime factorization <p style="text-align: center;"><u>Unit 2</u></p> <ul style="list-style-type: none"> • value • digit • place • place value • algorithm • partial-sums method • column-addition method • variable • open sentence • solution • mean • minimum • maximum • range
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	<p>numbers.</p> <p>MA-5-NPO-S-PNO4 Students will use properties of numbers for written and mental computation (e.g., combine commutative and associative properties to rearrange multiplication exercises such as $4 \times (7 \times 5)$ which can be rearranged as $(4 \times 5) \times 7$ to simplify the multiplication).</p> <div style="border: 1px solid black; padding: 5px;"> <p>MA-5-NPO-S-E1 Students will explore appropriate estimation procedures for different situations.</p> </div> <p>MA-5-NPO-S-E2 Students will apply and explain appropriate strategies for estimating quantities of objects and computational results.</p>	<p><i>forward and backward.</i></p> <p>MA-05-1.5.1 Students will identify and determine composite numbers, prime numbers, multiples of a number, factors of a number and least common multiples (LCM), and will apply these numbers to solve real-world problems.</p> <p style="text-align: right;">DOK 2</p> <p><i>MA-05-1.5.2</i> <i>Students will use the commutative properties of addition and multiplication, the associative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.</i></p> <div style="border: 1px solid black; padding: 5px;"> <p>MA-05-1.2.1 Students will apply and</p> </div>	<p>and Computation</p> <p>(E1 & E2) Unit 2 – Estimation and Computation</p> <p>United Streaming</p>	<ul style="list-style-type: none"> • mode • median • magnitude estimate • lattice method • sample <p style="text-align: center;"><u>Unit 4</u></p> <ul style="list-style-type: none"> • divisor • dividend • quotient • remainder • map legend • map scale • <p style="text-align: center;"><u>Unit 5</u></p> <ul style="list-style-type: none"> • denominator • numerator • improper fraction • mixed number • equivalent fraction • rounding • repeating decimal • percent
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describe appropriate strategies for estimating quantities of objects and computational results in real-world problems.
DOK 2

- bar graph
- circle graph
- percent circle

Unit 6

- Organizing data
- Span
- Fathom
- Cubit
- Stem
- Leaf
- Survey
- Population
- Frequency table
- Contour map
- Climate
- Map legend
- Contour line

Time Line: Unit 3 – Beg. October – Late October (Oct. 8 th – Oct. 26 th)	Unit 9 – Beg. April – Late April (Apr. 1 st – April 18 th) Unit 11 – Embedded within Unit 9	Unit 12 – Embedded within Unit 1 (Late Aug – Mid. September)			
<u>Program of Studies:</u> <u>Big Idea</u>	<u>Program of Studies: Skills and Concepts</u>	<u>Related Core Content for Assessment (DOK)</u>	<u>Resources/Activities</u>	<u>Assesment</u>	<u>Vocabulary</u>
Big Idea: Measurement Students translate from measuring using nonstandard units to using standard units of measurement. They identify measurable attributes of objects, estimate and measure weight, length, perimeter, area, angles, temperature, time and money. They convert units within the same measurement system.	MA-5-M-U-1 Students will understand that there are two major measurement systems (U.S. Customary and metric) and either may be used to solve problems. MA-5-M-S-MPA3 Students will apply standard units of measure to length, weight, temperature and liquid capacity. MA-5-M-S-MPA8 Students will solve problems involving money.	MA-05-2.1.1 Students will apply standard units to measure length (to the nearest eighth-inch or the nearest centimeter) and to determine: <ul style="list-style-type: none"> • weight (ounce, pound; gram, kilogram); • perimeter; • area (figures that can be divided into rectangular shapes); • time (nearest minute); • temperature (Fahrenheit and Celsius) and • angle measures (nearest degree). <p style="text-align: right;">DOK 2</p> <i>MA-05-2.1.2</i> <i>Students will choose and</i>	Everyday Math Unit 9 – Coordinates, Area, Volume, and Capacity Unit 11 – Volume Unit 3 –Geometry Explorations Unit 12 – Probability, Ratios, and Rates Embedded throughout curriculum of Everyday Math	Checking Progress Unit Tests Study Links Math Boxes Exit Slips Open Response	<u>Unit 9</u> <ul style="list-style-type: none"> • coordinate grid • ordered number pairs • coordinate • axis • transformation • opposite of a number • area • square units • base • height • formula • variable • rectangle method • perpendicular

	<p>MA-5-M-S-SM1 Students will relate and convert units (e.g., linear, volume, weight) within a measurement system (e.g., 125 cm = 1m 25 cm).</p> <p>MA-5-M-S-SM2 Students will convert units within the U.S. monetary system.</p> <p>MA-5-M-S-SM3 Students will convert units of time and determine elapsed time.</p> <p>MA-5-M-S-SM4 Students will describe, define, give examples of and use to solve real-world and/or mathematical problems both nonstandard and standard (U.S. Customary, metric) units of measurement to include length, time, money, temperature (°F</p>	<p><i>use appropriate tools (e.g., protractor, meter stick, ruler) for specific tasks and apply skills to solve real-world and mathematical problems.</i></p> <p><i>MA-05-2.1.3</i> <i>Students will use measurements to identify, describe, sort and compare attributes of objects and apply these to solve real-world and mathematical problems.</i></p> <p><i>MA-05-2.1.4</i> <i>Students will measure volume of rectangular prisms, liquid capacity, and money using standard units and apply these skills to solve real-world and mathematical problems.</i></p> <p>MA-05-2.1.6 Students will estimate weight, length, perimeter, area, angle measures and time using appropriate units of measurement.</p>	<p>United Streaming</p>	<ul style="list-style-type: none"> • latitude • longitude • volume • capacity • liter • quart • cup • millimeter <p style="text-align: center;"><u>Unit 3</u></p> <ul style="list-style-type: none"> • census • acute angle • obtuse angle • right angle • reflex angle • radius • center • diameter • vertical angle • adjacent angles • equilateral triangle • isosceles triangle • scalene • congruent • regular
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	<p>and °C) and weight.</p> <p>MA-5-M-S-MPA1 Students will measure and construct angles to the nearest degree.</p> <p>MA-5-M-S-MPA2 Students will use charts and tables to determine time schedules, work with time zones and estimate time.</p> <p>MA-5-M-S-MPA4 Students will choose and use appropriate tools (e.g., protractor, angle ruler, meter stick, ruler) for measurement tasks.</p> <p>MA-5-M-S-MPA5 Students will use measures to identify, describe, sort and compare attributes of objects.</p> <p>MA-5-M-S-MPA6 Students will use standard units to determine area and perimeter of triangles and rectangles and volume of rectangular prisms and apply these skills to solve real-world and mathematical problems.</p>	<p style="text-align: right;">DOK 2</p> <p>MA-05-2.2.1 Students will determine elapsed time.</p> <p style="text-align: right;">DOK 3</p> <p>MA-05-2.2.3 Students will convert units within the same measurement system [U.S. customary (inches, feet, yards, miles; ounces, pounds, tons), metric (millimeters, centimeters, meters, kilometers; grams, kilograms), money, or time] and use the units to solve problems.</p> <p>DOK 2</p>			<p> <ul style="list-style-type: none"> • polygon • tessellation • regular tessellation • tessellate • perimeter • parallelogram • pentagon • kite <p style="text-align: center;"><u>Unit 11</u></p> <ul style="list-style-type: none"> • geometric solid • prism • face • cylinder • cone • sphere • edge • vertex • flat surface • curved surface • polyhedron • cube • apex • displacement • calibrate • surface area </p>
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	<p>MA-5-M-S-SM4 Students will describe, define, give examples of and use to solve real-world and/or mathematical problems both nonstandard and standard (U.S. Customary, metric) units of measurement to include length, time, money, temperature (°F and °C) and weight.</p> <p>MA-5-M-S-MPA7 Students will estimate weight, length, perimeter, area and angles using appropriate units of measurement.</p>				<p><u>Unit 12</u></p> <ul style="list-style-type: none"> • factor trees • prime factorization • common factor • greatest common factor(GCF) • probability • ratio • ratio comparison • magnitude • rate • profile
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Timeline: Unit 6 – Mid December to Late January (Dec 17 – Jan 25)
 Unit 12 – Incorporate with Unit 1 (Late August – Mid September)

<u>Program of Studies:</u> <u>Big Idea</u>	<u>Program of Studies: Skills and Concepts</u>	<u>Related Core Content for Assessment (DOK)</u>	<u>Resources/Activities</u>	<u>Assessment</u>	<u>Vocabulary</u>
<p>Big Idea: Data Analysis and Probability Students pose questions, plan and collect data, organize and display data and interpret displays of data. They generate outcomes for simple probability activities, determine fairness of probability games and explore likely and unlikely events.</p>	<p>MA-5-DAP-U-1 Students will understand that quantitative literacy is a necessary tool to be an intelligent consumer and citizen.</p> <p>MA-5-DAP-U-2 Students will understand that the collection, organization, interpretation and display of data can be used to answer questions Students will understand that the choice of data display can affect the visual message communicated</p> <p>MA-5-DAP-U-4 Students will understand</p>	<p>MA-05-4.1.1 Students will analyze and make inferences from data displays (drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs). DOK 3</p> <p>MA-05-4.1.2 <i>Students will collect data (e.g., tallies, surveys) and explain how the skills apply in real-world and mathematical problems.</i></p> <p>MA-05-4.1.3 Students will construct data displays (pictographs, bar graphs, line plots, line</p>	<p><u>Everyday Math</u> Unit 6: Using Data Unit 12: Probability, Ratios, and Rates Maps Project: How to Spend a Million Dollars; internet, advertisements, catalogues, store flyers, etc. United Streaming</p>	<p>Checking Progress Unit Tests Study Links Math Boxes Exit Slips Open Response</p>	<p><u>Unit 6</u></p> <ul style="list-style-type: none"> • Organizing data • Span • Fathom • Cubit • Stem • Leaf • Survey • Population • Frequency table • Contour map • Climate • Map legend • Contour line <p><u>Unit 12</u></p> <ul style="list-style-type: none"> • factor trees • prime

	<p>that inferences and predictions from data are used to make critical and informed decisions.</p> <p>MA-5-DAP-U-5 Students will understand that for a given set of data, the measures of central tendency (mean and median) can be different.</p> <p>MA-5-DAP-U-6 Students will understand that probability can be used to make decisions or predictions or to draw conclusions.</p> <p>MA-5-DAP-S-DR4 Students will analyze and make inferences from data displays (e.g., drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs).</p> <p>MA-5-DAP-S-DR1</p>	<p>graphs, Venn diagrams, tables).</p> <p><i>DOK 2</i></p> <p>MA-05-4.2.1 Students will determine and apply the mean, median, mode and range of a set of data. DOK 2</p> <p><i>MA-05-4.3.1</i> <i>Students will describe and give examples of the process of using data to answer questions (e.g., pose a question, plan, collect data, organize and display data, interpret data to answer questions).</i></p> <p>MA-05-4.4.1 Students will determine all possible outcomes of an activity/event with up to 12 possible outcomes. DOK 2</p> <p>MA-05-4.4.2 Students will determine the likelihood of an event and</p>			<p>factorization</p> <ul style="list-style-type: none"> • common factor • greatest common • factor(GCF) • probability • ratio • ratio comparison • magnitude • rate • profile
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	<p>Students will choose and use appropriate means to collect and represent data.</p> <p>MA-5-DAP-S-DR2 Students will explore line graphs to show change over time.</p> <p>MA-5-DAP-S-DR3 Students will pose questions and choose an appropriate method to collect, organize and display student-collected data to answer the questions.</p> <p>MA-5-DAP-S-ES1 Students will pose questions and collect, organize, display and interpret data to answer the questions.</p> <p>MA-5-DAP-S-DR5 Students will use a variety of tools (e.g., graph paper, manipulatives, models, computer) to construct</p>	<p>the probability of an event (expressed as a fraction). DOK 2</p>			
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data displays (e.g., pictographs, bar graphs, line plots, line graphs, Venn diagrams, tables).

MA-5-DAP-S-DR4

Students will analyze and make inferences from data displays (e.g., drawings, tables/charts, tally tables, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs).

MA-5-DAP-S-CD1

Students will draw conclusions and make predictions based on data.

MA-5-DAP-S-CD2

Students will develop the meaning and interpretation of the arithmetic mean (average) for numerical data.

MA-5-DAP-S-CD3

Students will determine the mean, median, mode

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and range of a set of data and use the results to answer questions about the set of data.

MA-5-DAP-S-P1

Students will determine the possible outcomes of simple probability experiments that are conducted by using manipulatives

MA-5-DAP-S-P2

Students will determine the likelihood of an event and represent that likelihood in numerical terms.

MA-5-DAP-S-P3

Students will examine events and describe their probability as likely or unlikely.

MA-5-DAP-S-P4

Students will use counting techniques, tree

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	<p>diagrams and tables to explore probability experiments.</p> <p>MA-5-DAP-S-P5 Students will determine all possible outcomes of an activity/event with up to 20 possible outcomes.</p>				
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Timeline: Continuous throughout all units
 Unit 10 – Beginning of May – End of May

<u>Program of Studies:</u> <u>Big Idea</u>	<u>Program of Studies: Skills and Concepts</u>	<u>Related Core Content for Assessment (DOK)</u>	<u>Resources/ Activities</u>	<u>Assessment</u>	<u>Vocabulary</u>
<p>Big Idea: Algebraic Thinking Students explore and examine patterns and develop rules to go with patterns. They generate input-output for functions and create tables to analyze functions. Students use number sentences with missing values.</p>	<p>MA-5-AT-U-1 Students will understand that patterns, relations and functions are tools that help explain or predict real-world phenomena.</p> <p>MA-5-AT-U-2 Students will understand that numerical patterns can be written as rules that generate the pattern</p> <p>MA-5-AT-U-3 Students will understand that algebra represents mathematical situations and structures for analysis and problem solving.</p>	<p>MA-05-5.1.1 Students will extend patterns, find the missing term(s) in a pattern or describe rules for patterns (numbers, pictures, tables, words) from real-world and mathematical problems. DOK 3</p> <p>MA-05-5.1.1 Students will extend patterns, find the missing term(s) in a pattern or describe rules for patterns (numbers, pictures, tables, words) from real-world and mathematical problems. DOK 3</p> <p>MA-05-5.3.1</p>	<p>Math Boxes embedded throughout curriculum in <u>Everyday Math</u></p> <p>Number Stories embedded throughout curriculum in <u>Everyday Math</u></p> <p>“American Tour” embedded throughout curriculum in <u>Everyday Math</u></p> <p><u>Continental Math: Euclidean Division</u></p>	<p>Checking Progress Unit Tests</p> <p>Study Links</p> <p>Math Boxes</p> <p>Exit Slips</p> <p>Open Response</p>	<p>Unit 10</p> <ul style="list-style-type: none"> • algebraic expression • rate of speed • formula • variable • geyser • predict • ordered number pairs • coordinates

	<p>MA-5-AT-U-4 Students will understand that real-world situations can be represented using mathematical models to analyze quantitative relationships.</p> <p>MA-5-AT-U-5 Students will understand that functions are used to analyze change in various contexts and model real-world phenomena.</p> <p>MA-5-AT-U-6 Students will understand that functions can be written in words, as a symbolic sentence or in a table.</p> <p>MA-5-AT-S-PRF1 Students will create, recognize, extend, find and write rules for patterns.</p> <p>MA-5-AT-S-PRF2 Students will generalize a rule for sets of ordered</p>	<p>Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a variable or missing value (e.g., $4 = 2 \times N$, $___ + 5 > 14$) and apply simple number sentences to solve mathematical and real-world problems. DOK 2</p> <p>MA-05-5.3.1 Students will model real-world and mathematical problems with simple number sentences (equations and inequalities) with a variable or missing value (e.g., $4 = 2 \times N$, $___ + 5 > 14$) and apply simple number sentences to solve mathematical and real-world problems. DOK 2</p> <p>MA-05-5.1.2 Students will describe functions (input-output)</p>	<p>Unit 10: Algebraic Concepts and Skills</p>		
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	<p>pairs.</p> <p>MA-5-AT-S-VEO1 Students will explore unknowns and open sentences to express relationships.</p> <p>MA-5-AT-S-VEO2 Students will represent real-world situations with mathematical sentences containing missing values.</p> <p>MA-5-AT-S-VEO3 Students will use variables or missing values to model verbal descriptions of real-world situations.</p> <p>MA-5-AT-S-EI1 Students will apply simple equations and simple inequalities to solve mathematical and/or real-world problems.</p> <p>MA-5-AT-S-PRF4</p>	<p>through pictures, tables, or words and will construct tables to analyze functions based on real-world or mathematical problems. DOK 2</p> <p>MA-05-5.1.3 Students will determine an output value or an input value for a function rule given the other value. DOK 2</p> <p>MA-05-5.2.1 Students will model verbal descriptions of real-world and mathematical problems using a variable or a missing value in an expression. DOK 2</p>			
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Students will construct tables to analyze functions based on real-world or mathematical situations.

MA-5-AT-S-VEO3

Students will use variables or missing values to model verbal descriptions of real-world situations.

MA-5-AT-S-EI2

Students will model real-world situations with simple number sentences using manipulatives, numbers, variables and/or symbols.

MA-5-AT-S-PRF3

Students will describe input-output functions through pictures, tables and/or words

MA-5-AT-S-PRF4

Students will construct tables to analyze functions based on real-world or mathematical situations

Timeline for 2007-2008 School Year
Everyday Math Curriculum

Approximate Dates

Unit 1 with Unit 12 incorporated – Late August to Mid September

Unit 2 – Mid September to Beginning of October

Unit 3 – Beginning of October to Late October

Unit 4 – Late October to Mid November

Unit 5 – Mid November to Mid December

Unit 6 – Mid December to Late January

Unit 7 – Late January to Late February

Unit 8 – Late February to Late March

(Spring Break)

Unit 9 with Unit 11 incorporated – Beginning of April to Late April

Unit 10 – Beginning of May to End of School