

Curriculum & Pacing Guide

Grade 4: Mathematics



Martinsville City Public Schools

Revised Summer 2011

Updated Summer 2012 tjv

Martinsville City Public Schools' Instructional Plan of Action

The **Martinsville City Public Schools Curriculum Guide** was developed using the *Standards of Learning for Virginia Public Schools* and the **State Curriculum Framework**. Also, an emphasis was placed on the integration of *21st Century Skills* into all areas of K-12 education. **Martinsville City Public Schools** believes that to compete in a global community, all children must develop lifelong independent skills that demonstrate initiative, self direction, and the ability to problem-solve, innovate and create, and communicate by writing and speaking effectively. **To provide an avenue for students to develop these important qualifications and provide a more rigorous learning environment, Martinsville City Public Schools encourages problem-based learning in all classrooms.** The collaboration between students in this type of learning environment develops skills in leadership, accountability, social, and cross-cultural understanding as they communicate and think critically to problem-solve real world applications of the curriculum. **Martinsville City Public Schools'** Core curriculum prepares students to achieve these 21st Century skills through competent *cross-curricular* activities that apply knowledge of concepts learned in other areas of study and in the community.

Standard benchmark assessments along with project-based assessments and end of year SOL tests are administered to ensure mastery of the concepts. **PALS** assessments are used to ensure proficiency in Reading for grades Pre-K through Eight. To further ensure that all students learn to the best of their abilities, a **Response to Intervention (Rti)** system, using **STAR Math, STAR Reading and Algebra Readiness Diagnostic Test (ARDT)**, is in place to guide classroom instruction, screen and progress monitor students so that intervention and enrichment activities are scheduled based on the students individual needs throughout the year.

Curriculum Guide OVERVIEW

The **Martinsville City Public Schools' Curriculum Guide** is designed to provide a reference document for each subject and grade level that indicates *The Curriculum's Big Ideas, Instructional Strategies, Model lessons, & Assessment Instruments* and suggested time frames to be used as a *Guide* for classroom instruction. In addition, **Learning Targets at a Glance** contains an overview of the curriculum taught for each grading period for each subject and grade level. 21st Century Internet Safety procedures are listed, and for Grades Three through Twelve, an **SOL Testing Blueprint Target** is included to give insight to the strands that will receive the most focus on the SOL Assessments. Two symbols will be used to denote the 21st Century Focus:



This symbol is used throughout to denote a 21st Century skill.



This symbol is used throughout to denote a 21st Century Global Connection.

Learning Overview

The Fourth Grade student will be provided many opportunities to engage in experiences involving problem solving, data collection and analysis, and algebraic thinking. The Virginia Standards of Learning provide the foundation for fourth grade mathematics. The standards are organized into 6 strands:

Number/Number Sense: The focus of instruction allows students to investigate and develop an understanding of number sense by modeling numbers, using different representations. Students should develop strategies for reading, writing, and judging the size of numbers, fractions and decimals by comparing them, using a variety of models and benchmarks as ferments.



Computation and Estimation: The focus of instruction allows students to develop fluency in multiplication and division with whole numbers and decimals, using models, explanation, and proficiency with basic facts and algorithms.

Measurement: The focus of instruction allows students to be actively involved in measurement activities that focus on measuring objects and estimating measurements while interacting with their environment.





Geometry: The focus of instruction allows students to develop and understanding about how geometric figures relate to each other and begin to use mathematical reasoning to analyze and justify properties and relationships among figures.

Probability and Statistics: The focus of instructions allows students to deepen their understanding of concepts of probability by offering opportunities to set up models simulating practical events, engage students in activities to enhance understanding fairness, and activities that instill a spirit of investigation and exploration through use of manipulatives.

Patterns, Function, and Algebra: The focus of instruction is to help students develop a solid use of patterning as a problem solving tool by interpreting the structure of patterns through exploration and describing patterns and their changes.

Curriculum Big Ideas	Instructional Strategies & Model Lessons	Assessment Items
<p>The organizing topics, big ideas, or strands under which student learning is organized and the Essential Understandings, Knowledge and Skills students must develop in order to master these concepts (typically from the standards found in the VDOE curriculum framework). Essential Understandings—what we want students to understand about this idea, topic, or concept Essential Knowledge—What students must know in order to develop this understanding Essential Skills—What students must be able to do in order to demonstrate that understanding</p> <p> Standards of Learning that meet the criteria for 21st Century skills will be identified by this symbol</p> <p> Standards of Learning that meet the 21st Century Learning of Global Connections will be designated with this symbol</p>	<p><i>Resources, strategies, and models for delivery of the curriculum.</i> <i>Includes suggested teaching strategies, links to model lesson plans links to frequently referenced online sites, and suggested teacher resources and where to find them (online and hard copy, such as texts, primary source documents, etc.)</i></p>	<p><i>Examples of formative and summative assessments for measuring student mastery of the curriculum.</i> <i>Includes essential questions, writing prompts, sample test items, benchmark test links, model performance-based assessments, and other assessment resources.</i></p>

Learning Targets at a Glance – 4th Grade Math

First Quarter 8/13-10/15 	Second Quarter 10/16-12/21 	Third Quarter 1/8-3/13 	Fourth Quarter 3/14-5/22 
4.15 – recognize, create & extend geometrical and numerical patterns 4.1- place value to millions, compare, round 4.4- estimate/add/subtract whole numbers -solve single and multi-step problems 4.16- equality & properties (association)	4.2- compare & order fractions -fractions as division -represent equivalent fractions 4.3- read, write & represent decimals through thousandths -round (nearest whole, tenth, hundredth) -compare & order -relate fractions/decimals w/models 4.4- estimate/multiply by 1 & 2 digits -divide whole numbers -find quotient w/wo remainders -solve single/multi-step problems	4.7- estimate & measure length -identify equivalent measurements US Customary/metric 4.6- estimate & measure weight/mass -identify equivalent measurements US Customary/metric 4.8- estimate & measure liquid volume -identify equivalent measurements US Customary/metric 4.9- determine elapsed time in hours and Minutes	4.10- points, lines, line segments, rays, Angles -parallelism, perpendicularity 4.11- congruency - transformations: reflections, translations, rotations 4.12- polygons 4.15 -review geometric patterns 4,13- probability 4.14- collect, organize and display data -construct and interpret graphs

<p><u>Ongoing Practice and Review:</u> Daily 10 minute basic fact reviews, Multiples and factors, problem solving</p>	<p>4.5- estimate.add/subtract fractions -common multiples and factors -solve single/multi-step problems -estimate/add/subtract decimals -solve single/multi-step problems</p> <p><u>Ongoing Practice and Review:</u> Daily 10 minute basic fact reviews, Multiples and factors, problem solving</p>	<p><u>Ongoing Practice and Review:</u> Daily 10 minute basic fact reviews, Multiples and factors, problem solving</p>	<p><u>Ongoing Practice and Review:</u> Daily 10 minute basic fact reviews, Multiples and factors, problem solving</p>
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Grade 4 Mathematics Test Blueprint Summary Table

50 question test

Number/Number Sense	Computation/Estimation	Measurement/Geometry	Probability, Statistics, Patterns, Functions and Algebra
12	13	13	12

Suggested Time Allocation for a 60 Minute Math Block





21st Century Internet Safety Procedures

- 1. Teachers should review all internet sites and links prior to using them in the classroom. During this review, teachers need to ensure the appropriateness of the content on the site. Checking for broken links and paying attention to inappropriate pop-ups or solicitations of information.**
- 2. Teachers should circulate throughout the classroom while students are on the internet to make sure the students are on the appropriate site and are not minimizing other inappropriate sites.**
- 3. Teachers should periodically check and update any web addresses that they have on their MCPS webpage.**
- 4. Teachers should assure that the use of these websites correlate with the objectives of the lesson and provide students with the appropriate challenges.**

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>1st Grading period</p> <p>1 week</p>	<p>SOL 4.15</p> <p>The student will recognize, create, and extend numerical and geometric patterns.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Describe geometric and numerical patterns, using tables, symbols, or words. Create geometric and numerical patterns, using concrete materials, number lines, tables, and words. Extend geometric and numerical patterns, using concrete materials, number lines, tables, and words. 	<p>Pattern</p> <p>Numerical pattern</p> <p>Geometric pattern</p> <p>Extend</p> <p>Number line</p> <p>Table</p> <p>Symbols</p> <p>Function</p> <p>Values</p> <p>Continue</p>	<p>Base 10 Blocks</p> <p>Straw/stick Bundles</p> <p>Digit Cards</p> <p>Place Value Charts</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Pattern Lesson</p> <p>VDOE- Math K-5 Modules</p>	<p>Math Out of the Box Signs & Symbols Module A Lessons 1-6 11-20</p> <p>Module B Lessons</p> <p>EnVision Math L.5-1 pp. 96-97 6-1 pp. 128-128 6-2 pp. 130-131 6-3 pp.132-133 7-1 pp.142-143 7-6 pp.154-155 14-9 pp.336-339 15-5 pp.356-357</p> <p>Enhanced Scope and Sequence (ESS) 4.15 Toothpicks Lesson</p> <p>VDOE- Math Voc. Word Wall Cards</p>	<p>STAR MATH</p> <p>Teacher Made Assessments</p>	

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
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<p>SOL 4.1</p> <p>The student will:</p> <p>a) identify orally and in writing the place value for each digit in a whole number expressed through millions;</p> <p>b) compare two whole numbers expressed through millions, using symbols (>, <, or =);</p> <p>c) round whole numbers expressed through millions to the nearest thousand, ten thousand and hundred thousand.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Identify and communicate, both orally and in written form, the placed value for each digit in whole numbers expressed through the one millions place. Read whole numbers through the one millions place that are presented in standard format, and select the matching number in written format. Write whole numbers through the one millions place in standard format when the numbers are presented orally or in written format. 	<p>Place-value system</p> <p>Place values</p> <p>Ones</p> <p>Tens</p> <p>Hundreds</p> <p>Thousands</p> <p>Ten Thousands</p> <p>Hundred Thousands</p> <p>Millions</p> <p>Digit</p> <p>Expressed</p> <p>Whole number</p> <p>Symbol</p> <p>Standard form</p> <p>Written form</p> <p>Expanded form</p> <p>Period</p> <p>Rounding</p> <p>Comparing</p> <p>Greater than</p> <p>Less than</p> <p>Equal to</p>	<p>Base 10 Blocks</p> <p>Straw/stick Bundles</p> <p>Digit Cards</p> <p>Place Value Charts</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Place Value Lesson</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4th-grade-sol-4-1a-place-value</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4-1b-comparing</p>	<p>Math Out of the Box</p> <p>Stories /Statements</p> <p>Lessons 8 – 10</p> <p>Lessons 11 – 13</p> <p>Lesson 15</p> <p>EnVision Math</p> <p>L. 1-1 pp. 4.7</p> <p>1-2 pp. 8-9</p> <p>1-3 pp. 10-13</p> <p>1-4 pp. 14-15</p> <p>Enhanced Scope and Sequence (ESS)</p> <p>4.1</p> <p>Location, location, location:</p> <p>Number/Number Sense</p> <p>VDOE- Modules</p> <p>In-Step with Numbers</p> <p>The Rocky Digits</p> <p>Rounding Math</p> <p>VDOE-</p> <p>Math Voc. Word Wall Cards</p>	<p>STAR MATH</p> <p>Teacher Made Assessments</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>1st Grading period</p> <p>1 week</p>	<p>SOL 4.1 Continued</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Identify and use the symbols for <i>greater than, less than, and equal to</i>. Compare two whole numbers expressed through the one millions, using symbols $>$, $<$, or $=$. Round whole numbers expressed through the one millions place to the nearest thousand, ten thousand, and hundred-thousand place. 	<p>Place-value system</p> <p>Place values Ones Tens Hundreds Thousands Ten Thousands Hundred Thousands Millions</p> <p>Digit Expressed Whole number Symbol Standard form Written form Expanded form Period Rounding Comparing Greater than Less than Equal to</p>	<p>Base 10 Blocks</p> <p>Straw/stick Bundles</p> <p>Digit Cards</p> <p>Place Value Charts</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Place Value Lesson https://sites.google.com/a/solteacher.com/a/solteacher.com/home/4th-grade/4th-grade-math/math-4th-grade-sol-4-1a-place-value</p> <p>https://sites.google.com/a/solteacher.com/a/solteacher.com/home/4th-grade/4th-grade-math/math-4-1b-comparing</p>	<p>Math Out of the Box Stories /Statements Module A Lessons 8 – 10 Lessons 11 – 12 Lesson 15</p> <p>EnVision Math 1-1 pp. 4-7 1-2 pp. 8-9 1-3 pp. 10-13 1-4 pp. 14-15</p> <p>Enhanced Scope and Sequence (ESS) 4.1 Location, location, location:</p> <p>VDOE- Modules In-Step with Numbers The Rocky Digits Rounding Math</p>	<p>STAR MATH</p> <p>Teacher Made Assessments</p>	

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>1st Grading period</p> <p>1 week</p>	<p>SOL 4.4</p> <p>The student will: a.) estimate <u>sums</u>, <u>differences</u>,</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Develop and use strategies to estimate whole number sums and differences and to judge the reasonableness of such results. Estimate whole number sums, differences, products, and quotients. Refine estimates by adjusting the final amount, using terms such as <i>closer to</i>, <i>between</i>, and <i>a little more than</i>. 	<p>Estimate</p> <p>Sum</p> <p>Difference</p> <p>Exact amount</p> <p>Front-end estimation</p> <p>Leading digit estimation</p> <p>compatible numbers</p> <p>Closer to</p> <p>Between</p> <p>A little more than</p>	<p>Base 10 Blocks</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Estimation Lesson</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/sol-4-4-math-estimation</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/sol-4-4b-math-crunching-the-numbers</p>	<p>Math Out of the Box Stories/Statements Module A Lesson 15</p> <p>Envision Math L. 2-2 pp. 32-33</p> <p>VDOE ESS: 4.4 Estimation Game</p>	<p>STAR MATH</p> <p>Teacher Made Assessments</p>	

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		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>1st Grading period</p> <p>1 week</p>	<p>SOL 4.4</p> <p>The student will</p> <p>b) <u>add & subtract</u> whole numbers;</p> <p>d) solve single-step and multistep <u>addition, & subtraction</u> problems with whole numbers.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Determine the sum or difference of two whole numbers, each 999.999 or less, in vertical and horizontal form with or without regrouping, using paper and pencil, and using a calculator Solve single-step and multistep problems using whole number operations Verify the reasonableness of sums, differences, products, and quotients of whole numbers using estimations 	<p>Addition</p> <p>Sum</p> <p>Addend</p> <p>Combining quantities</p> <p>Subtraction</p> <p>Difference</p> <p>Minuend</p> <p>Subtrahend</p> <p>Separating quantities</p> <p>Regrouping</p> <p>Vertical form</p> <p>Horizontal form</p> <p>Inverse operations</p>	<p>Base 10 Blocks</p> <p>Calculator</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Addition Lesson Subtraction Lesson</p>	<p>Math Out of the Box</p> <p>Stories/Statements Module A Lessons 14 – 15</p> <p>Envision Math</p> <p>4.4b 2-4 pp. 36-39 2-5 pp. 40-41 2-6 pp. 42-45 2-7 pp. 44-47</p> <p>4.4d 1-7 pp. 20-21 2-3 pp. 34-35</p> <p>VDOE ESS:</p> <p>4.4 Modeling Addition and Subtraction</p>	<p>STAR MATH</p> <p>Teacher Made Assessments</p>	

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		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>1st Grading period</p> <p>1 week</p>	<p>SOL 4.4</p> <p>The student will:</p> <p>a) estimate <u>products</u> of whole numbers;</p> <p>b) <u>multiply</u> whole numbers;</p> <p>d) solve single-step and multistep <u>multiplication</u> problems with whole numbers.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Estimate whole number products. Estimate and find the products of two whole numbers when one factor has two digits or fewer and the other factor has three digits or fewer, using paper and pencil and calculators. Solve single-step and multistep problems using whole number operations. Verify the reasonableness of products of whole numbers using estimation. 	<p>Multiply</p> <p>Factor</p> <p>Product</p> <p>Repeated addition</p> <p>Partial product</p> <p>Lattice</p> <p>Estimate</p> <p>Digit</p> <p>Arrays</p>	<p>Base 10 Blocks</p> <p>Multiplication Chart</p> <p>Calculator</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Multiplication Lesson https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/sol-4-4-math-estimation</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/sol-4-4b-math-crunching-the-numbers</p>	<p>Math Out of the Box</p> <p>Stories/Statements Module A Lessons 19 – 25, 30</p> <p>Envision Math 4.4a</p> <p>5-3 pp 100-101 7-2 pp. 144-145</p> <p>4.4b</p> <p>3-4 pp. 62-63 3-5 pp. 64-65 3-6 pp. 66-67 3-7 pp. 68-69 5-1 pp. 96-97 5-2 pp. 98-99 5-6 pp. 110-113 5-7 pp. 114-115 7-1 pp. 142-143 7-3 pp. 146-147 7-4 pp. 150-151 7-5 pp. 152-153 7-6 pp. 154-155</p> <p>4.4d</p> <p>5-8 pp. 116-119 7.7 pp. 156-157</p> <p>VDOE ESS: *Multiplying Trading *Let’s Do Lunch</p>	<p>STAR MATH</p> <p>Teacher Made Assessments</p>	

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>1st Grading period</p> <p>1 week</p>	<p>SOL 4.16</p> <p>The student will</p> <p>a) recognize and demonstrate the meaning of equality in an equation; and</p> <p>b) investigate and describe the associative property for addition and multiplication</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Recognize and demonstrate that the equals sign (=) relates equivalent quantities in an equation. Write an equation to represent equivalent mathematical relationships (e.g., $4 \times 3 = 2 \times 6$). Recognize and demonstrate appropriate use of the equals sign in an equation. Investigate and describe the associative property for addition as $(6 + 2) + 3 = 6 + (2 + 3)$. Investigate and describe the associative property for multiplication as $(3 \times 2) \times 4 = 3 \times (2 \times 4)$. 	<p>Equality</p> <p>Equation</p> <p>Quantities</p> <p>Number sentence</p> <p>Equivalent</p> <p>Commutative Property</p> <p>Associative Property</p> <p>Grouping</p> <p>Parentheses</p> <p>Order of operations</p>	<p>Hands On Equations Kits</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website</p> <p>http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Equality Lesson</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-16a-equality</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/associative-property</p>	<p>Math Out of the Box Stories /Statements Module A Lessons 1 – 4 Lessons 5 – 6 Lesson 26</p> <p>EnVision Math 4.16a 18-1 pp. 432-433 4.16b 2-1 pp. 28-31</p> <p>VDOE ESS: What’s It Worth?</p>	<p>STAR MATH</p> <p>Teacher Made Assessments</p>	

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>2nd Grading period</p> <p>2 weeks</p>	<p>SOL 4.4</p> <p>The student will</p> <p>a) estimate <u>quotients</u> of whole numbers;</p> <p>c) <u>divide</u> whole numbers, finding quotients with and without remainder</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Verify the reasonableness of quotients of whole numbers using estimation 	<p>Divide</p> <p>Equal groups</p> <p>Equal shares</p> <p>Dividend</p> <p>Divisor</p> <p>Quotient</p> <p>Repeated subtraction</p> <p>Remainder</p> <p>Repeated multiplication</p> <p>Arrays</p> <p>Division symbols</p> <p>Multiples</p> <p>Skip counting</p>	<p>Base 10 Blocks</p> <p>Calculators</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website</p> <p>http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker</p> <p>Division Lesson</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-4c-division</p>	<p>Math Out of the Box</p> <p>Stories/Statements Module A Lessons 27-30</p> <p>EnVision Math 4.4a</p> <p>8-2 pp. 166-167</p> <p>4.4c</p> <p>4-2 pp. 80-81</p> <p>4-3 pp. 82-83</p> <p>4-4 pp. 84-85</p> <p>4-5 pp. 86-87</p> <p>8-1 pp. 164-165</p> <p>8-3 pp. 168-169</p> <p>8-4 pp. 170-173</p> <p>8-5 pp. 174-177</p> <p>8-6 pp. 178-179</p> <p>8-7 pp. 180-181</p> <p>VDOE ESS: (4.4)</p> <p>*Pears in a Basket</p> <p>*Estimation Game</p>	<p>STAR MATH</p> <p>Teacher Made Assessments</p>	


Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>2nd Grading period</p> <p>2 weeks</p>	<p>SOL 4.2</p> <p>The student will</p> <p>a) compare and order fractions and mixed numbers;</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Compare and order fractions having denominators of 12 or less, using manipulative models and drawings, such as region/area models. Compare and order fractions with like denominators by comparing number of parts (numerators) (e.g., $\frac{1}{5} < \frac{3}{5}$). Compare and order fractions with like numerators and unlike denominators by comparing the size of the parts (e.g., $\frac{3}{9} < \frac{3}{5}$). Compare and order fractions having unlike denominators of 12 or less by comparing the fractions to benchmarks (e.g., 0, $\frac{1}{2}$ or 1) to determine their relationships to the benchmarks or by finding a common denominator. 	<p>Fraction Numerator Denominator Region/area model Set model Measurement model Collection Location on a number line Whole Parts: Halves Thirds Fourths Fifths Sixths Sevenths Eighths Ninths Tenths Elevenths Twelfths Equivalent Common denominator Unlike denominator Mixed number Rational number</p>	<p>Fraction Strips Numberlines Fraction Circles Rods Pattern Blocks Cubes Base 10 Blocks Tangrams Graph Paper Multiplication Charts</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Comparing Fractions Lesson Ordering Fractions Lesson Mixed Numbers Lesson</p> <p>http://www.bgfl.org/bgfl/custom/resources_ftp/client_ftp/ks2/maths/fractions/index.htm</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4-2-fractions</p>	<p>Math Out of the Box Stories/Statements Module B Lessons 1 - 3</p> <p>EnVision Math 4.2a 10-7 pp. 234-235 10-8 pp. 236-237 12-4 pp. 276-279</p> <p>VDOE ESS: (4.2) *Pattern Block Fractions *Pattern Block Fraction Game *Comparing Fractions *Fraction Strips *Candy Bar Fractions *Circle Fractions</p>	<p>STAR MATH</p> <p>Teacher Made Assessments</p>	

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>2nd Grading period</p> <p>1 week</p>	<p>SOL 4.2a Continued</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Compare and order mixed numbers having denominators of 12 or less. Use the symbols $>$, $<$, and $=$ to compare the numerical value of fractions and mixed numbers having denominators of 12 or less. 	<p>Fraction Numerator Denominator Region/area model Set model Measurement model Collection Location on a number line Whole Parts: Halves Thirds Fourths Fifths Sixths Sevenths Eighths Ninths Tenths Elevenths Twelfths Equivalent Common denominator Unlike denominator Mixed number Rational number</p>	<p>Fraction Strips Numberlines Fraction Circles Rods Pattern Blocks Cubes Base 10 Blocks Tangrams Graph Paper Multiplication Charts</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Comparing Fractions Lesson Ordering Fractions Lesson Mixed Numbers Lesson</p> <p>http://www.bgfl.org/bgfl/custom/resources_ftp/client_ftp/ks2/maths/fractions/index.htm</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4-2-fractions</p>	<p>Math Out of the Box Stories/Statements Module B Lessons 1 - 3</p> <p>EnVision Math 4.2a 10-7 pp. 234-235 10-8 pp. 236-237 12-4 pp. 276-279</p> <p>VDOE ESS: (4.2) *Pattern Block Fractions *Pattern Block Fraction Game *Comparing Fractions *Fraction Strips *Candy Bar Fractions *Circle Fractions</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>2nd Grading period</p> <p>1 week</p>	<p>SOL 4.2</p> <p>The student will</p> <p>b) represent equivalent fractions</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Use models, benchmarks, and equivalent forms to judge the size of fractions. Recognize and generate equivalent forms of commonly used fractions and decimals. Represent equivalent fractions through twelfths, using region/area models, set models, and measurement models. 	<p>Equivalent</p> <p>Cross Multiplication</p>	<p>Fraction Strips</p> <p>Numberlines</p> <p>Fraction Circles</p> <p>Rods</p> <p>Pattern Blocks</p> <p>Cubes</p> <p>Base 10 Blocks</p> <p>Tangrams</p> <p>Graph Paper</p> <p>Multiplication Charts</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Equivalent Fractions Lesson</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4-2-fractions</p>	<p>Math Out of the Box</p> <p>Stories/Statements Module B Lesson 3</p> <p>EnVision Math 10-4 pp. 224-227</p> <p>VDOE Module: 4.2b Brownies</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>2nd Grading period</p> <p>Taught with Math SOL 4.4a,c for 2 weeks</p>	<p>SOL 4.2</p> <p>The student will</p> <p>c) identify the division statement that represents a fraction.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations</p> <ul style="list-style-type: none"> Identify the division statement that represents a fraction (e.g., $\frac{3}{5}$ means the same as 3 divided by 5). 	<p>Division statement</p> <p>Fraction bar</p> <p>Division symbol</p> <p>Fraction</p> <p>Equal</p>	<p>Fraction Strips</p> <p>Numberlines</p> <p>Fraction Circles</p> <p>Rods</p> <p>Pattern Blocks</p> <p>Cubes</p> <p>Base 10 Blocks</p> <p>Tangrams</p> <p>Graph Paper</p> <p>Multiplication Charts</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website</p> <p>http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker</p> <p>Division Lesson</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4-2-fractions</p>	<p>Math Out of the Box</p> <p>Stories/Statements</p> <p>Module B</p> <p>Lessons 1 - 3</p> <p>EnVision Math</p> <p>10-2 pp. 220-221</p> <p>VDOE Module:</p> <p>*To Be Half, or not to be Half, That is the Comparison”</p>		


Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>2nd Grading period</p> <p>2 days</p>	<p>SOL 4.5</p> <p>The student will</p> <p>a) determine common multiples and factors, including least common multiple and greatest common factor;</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Find common multiples and common factors of numbers. Determine the least common multiple and greatest common factor of numbers. Use least common multiple and/or greatest common factor to find a common denominator for fractions. 	<p>Multiples</p> <p>Factors</p> <p>Common multiples</p> <p>Least common multiple</p> <p>Greatest common factor</p> <p>Simplify fractions</p>	<p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Common Multiples Lesson</p> <p>Least Common Multiples Lesson</p> <p>Greatest Common Factor Lesson</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-5-common-factor</p>	<p>EnVision Math 3-2 pp. 58-59 8-8 pp. 182-183</p> <p>VDOE ESS: 4.5 *Number Ray Investigations *Finding Factors, Making Multiples *Factor Frenzy</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>2nd Grading period</p> <p>1 week</p>	<p> SOL 4.5 The student will:</p> <p>b) add and subtract fractions having like and unlike denominators that are limited to 2,3,4,5,6,8,10, and 12, and simplify the resulting fractions, using common multiples and factors</p> <p>d) solve single-step and multistep practical problems involving addition and subtraction with fractions and decimals</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Add and subtract with fractions having like or unlike denominators whose denominators are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fraction using common multiples and factors. Solve problems that involve adding and subtracting with fractions having like and unlike denominators whose denominators are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fraction using common multiples and factors. Solve single-step and multistep problems that involve adding and subtracting with fractions. 	<p>Fraction</p> <p>Multiples</p> <p>Factors</p> <p>Least common multiple (LCM)</p> <p>Greatest common factor</p> <p>Least common denominator (LCD)</p> <p>Numerator</p> <p>Denominator</p> <p>Like denominators</p> <p>Unlike denominators</p> <p>Simplify fractions</p> <p>Lowest terms</p>	<p>Fraction Circles</p> <p>Fraction Strips</p> <p>Rulers</p> <p>Linking Cubes</p> <p>Pattern Blocks</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Adding Fractions Lesson</p> <p>Subtracting Fractions Lesson http://funschool.kaboose.com/formula-fusion/games/game_action_fraction.html</p> <p>http://www.mathplayground.com/fractions_add.html</p>	<p>Math Out of the Box Stories /Statements Module B Lessons 11 – 12 Lessons 14 – 15</p> <p>EnVision 11-1 pp.250-253 11-2 pp. 254-255 11-3 pp. 256-257 11-4 pp. 258-261</p> <p>VDOE ESS: 4-5 b & d *Fraction Strip Addition *Fraction Strip Subtraction *Four In A Row. *Fraction Riddles</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>2nd Grading period</p> <p>1 week</p>	<p>SOL 4.3</p> <p>The student will</p> <p>a) read, write, represent, and identify decimals expressed through thousandths;</p> <p>b) round decimals to the nearest whole number, tenth, and hundredth;</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Investigate the ten-to-one place value relationship for decimals through thousandths, using Base-10 manipulatives (e.g., place value mats/charts, decimal squares, Base-10 blocks, money). Represent and identify decimals expressed through thousandths, using Base-10 manipulatives, pictorial representations, and numerical symbols (e.g., relate the appropriate drawing to 0.05). Identify and communicate, both orally and in written form, the position and value of a decimal through thousandths. For example, in 0.385, the 8 is in the hundredths place and has a value of 0.08. Read and write decimals expressed through thousandths, using Base-10 manipulatives, drawings, and numerical symbols. Round decimals to the nearest whole number, tenth, and hundredth. 	<p>Decimal</p> <p>Whole number</p> <p>Decimal number</p> <p>Decimal point</p> <p>Place value</p> <p>Tenths</p> <p>Hundredths</p> <p>Thousandths</p> <p>Estimate</p> <p>Round</p> <p>Standard form</p> <p>Written form</p> <p>Expanded form</p>	<p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Decimal Lessons</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/decimals</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/4-3-rounding-decimlas</p>	<p>Math Out of the Box</p> <p>Stories /Statements Module B Lessons: 4-7 Lessons: 10</p> <p>EnVision</p> <p>1-5 pp. 16-17 12-1 pp. 268-269 13-1 pp. 290-293</p> <p>VDOE ESS: 4.3 a & b</p> <p>* Reading and Writing Decimals</p> <p>*Rounding Decimals</p> <p>VDOE Modules:</p> <p>*Model Match</p> <p>*Decimal War</p> <p>*Memory Place Value: Decimal Match</p> <p>*What's My Number?</p> <p>*Decimal Spokes</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>2nd Grading period</p> <p>1 week</p>	<p>SOL 4.3</p> <p>The student will</p> <p>d) given a model, write the decimal and fraction equivalents.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Represent fractions for halves, fourths, fifths, and tenths as decimals through hundredths, using concrete objects (e.g., demonstrate the relationship between the fraction $\frac{1}{4}$ and its decimal equivalent 0.25). Relate fractions to decimals, using concrete objects (e.g., 10-by-10 grids, meter sticks, number lines, decimal squares, decimal circles, money [coins]). Write the decimal and fraction equivalent for a given model (e.g., $\frac{1}{4} = 0.25$ or $0.25 = \frac{1}{4}$). 	<p>Decimal</p> <p>Fraction</p> <p>Equivalent</p> <p>Model</p>	<p>10 X 10 Grids</p> <p>Meter Sticks</p> <p>Number lines</p> <p>Decimal Squares</p> <p>Money</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Decimal & Fraction Equivalents Lesson http://www.mrnusbaum.com/deathdecimals.htm https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/model-decimals</p>	<p>Math Out of the Box Stories /Statements Module B Lessons: 6, 9</p> <p>EnVision 12-3 pp. 274-275</p> <p>VDOE ESS: 4.3d *Fraction Grids *Reading and Writing Fractions</p> <p>VDOE Modules: *What’s My Number? *Fraction and Decimal Combo *Decimal Spokes</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>2nd Grading period</p> <p>1 week</p>	<p>SOL 4.3</p> <p>The student will c) compare and order decimals;</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Compare decimals, using the symbols >, <, =. Order a set of decimals from least to greatest or greatest to least. 	<p>Decimal</p> <p>Whole number</p> <p>Decimal number</p> <p>Decimal point</p> <p>Place value Tenths Hundredths Thousandths</p> <p>Estimate</p> <p>Round</p> <p>Compare</p> <p>Greater than (>)</p> <p>Less than (<)</p> <p>Equal to (=)</p> <p>Standard form</p> <p>Written form</p> <p>Expanded form</p>	<p>10 X 10 Grids</p> <p>Meter Sticks</p> <p>Number lines</p> <p>Decimal Squares</p> <p>Money</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Comparing Decimals Lesson</p> <p>Ordering Decimals Lesson</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/sol-4-3c-compare-decimals</p>	<p>Math Out of the Box Stories /Statements Module B Lessons: 8-9</p> <p>EnVision 12-2 pp. 270-273</p> <p>VDOE ESS: 4.3 c * Comparing Decimals</p> <p>VDOE Modules: *What’s My Number? *Decimal Spokes</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>2nd Grading period</p> <p>1 week</p>	<p> SOL 4.5</p> <p>The student will</p> <p>c) add and subtract with decimals; and</p> <p>d) solve single-step and multistep practical problems involving addition and subtraction with decimals.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Develop and use strategies to estimate addition and subtraction involving decimals. Use visual models to add and subtract with decimals. Add and subtract with decimals through thousandths, using concrete materials, pictorial representations, and paper and pencil. Solve single-step and multistep problems that involve adding and subtracting with decimals through thousandths. 	<p>Decimal</p> <p>Whole number</p> <p>Decimal number</p> <p>Decimal point</p> <p>Place value</p> <p>Tenths</p> <p>Hundredths</p> <p>Thousandths</p>	<p>10 X 10 Grids</p> <p>Number lines</p> <p>Decimal Squares</p> <p>Money</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Adding Decimals Lesson Subtracting Decimals Lesson</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/third-grade-math-sol-3-12-adding-subtracting-decimlas</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-5d-problems</p>	<p>Math Out of the Box Stories /Statements Module B Lessons 11 – 12 Lessons 14 - 15</p> <p>EnVision 13-3 pp. 296-299 13-4 pp. 300-303 13-7 pp. 308-309</p> <p>VDOE ESS: 4.5 c & d * Decimals Sums and differences *Problem Solving</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>3rd Grading period</p> <p>1 week</p>	<p>SOL 4.7</p> <p>The student will</p> <p>a) estimate and measure length, and describe the result in both metric and U.S. Customary units; and</p> <p>b) identify equivalent measurements between units within the U.S. Customary system (inches and feet; feet and yards; inches and yards; yards and miles) and between units within the metric system (millimeters and centimeters; centimeters and meters; and millimeters and meters).</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Determine an appropriate unit of measure (e.g., inch, foot, yard, mile, millimeter, centimeter, and meter) to use when measuring everyday objects in both metric and U.S. Customary units. Estimate the length of everyday objects (e.g., books, windows, tables) in both metric and U.S. Customary units of measure. 	<p>Length</p> <p>Inches</p> <p>Feet</p> <p>Yards</p> <p>Miles</p> <p>Millimeters</p> <p>Centimeters</p> <p>Meters</p> <p>Kilometers</p> <p>Measuring devices</p> <p>Benchmark comparisons</p> <p>Nearest part of an inch</p> <p>Nearest fraction of an inch</p> <p>Estimates</p> <p>Actual measurement</p> <p>Equivalent measurements</p> <p>Conversions</p>	<p>Centimeter ruler</p> <p>Meter Stick</p> <p>Tape Measurer</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Length Lessons</p> <p>http://www.linkslearning.org/Kids/1Math/2IllustratedLessons/2EstimationofLength/index.html</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-7-length</p>	<p>Math Out of the Box Inside/Outside Lessons 1 – 4</p> <p>EnVision 16-1 pp. 364-365 16-4 pp. 370-373 16-5 pp. 374-375 16-8 pp. 380-383</p> <p>VDOE ESS: 4.7 *Stick Figure Measurement</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>3rd Grading period</p> <p>1 week</p>	<p>4.7 continued</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <p>Measure the length of objects in both metric and U.S. Customary units, measuring to the nearest inch ($\frac{1}{2}, \frac{1}{4}, \frac{1}{8}$), foot, yard, mile, millimeter, centimeter, or meter, and record the length including the appropriate unit of measure (e.g., 24 inches).</p> <ul style="list-style-type: none"> Compare estimates of the length of objects with the actual measurement of the length of objects. Identify equivalent measures of length between units within the U.S. Customary measurements and between units within the metric measurements. 	<p>Length</p> <p>Inches</p> <p>Feet</p> <p>Yards</p> <p>Miles</p> <p>Millimeters</p> <p>Centimeters</p> <p>Meters</p> <p>Kilometers</p> <p>Measuring devices</p> <p>Benchmark comparisons</p> <p>Nearest part of an inch</p> <p>Nearest fraction of an inch</p> <p>Estimates</p> <p>Actual measurement</p> <p>Equivalent measurements</p> <p>Conversions</p>	<p>Centimeter ruler</p> <p>Meter Stick</p> <p>Tape Measurer</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Length Lessons</p> <p>http://www.linkslearning.org/Kids/1Math/2_Illustrated_Lessons/2_Estimation_of_Length/index.html</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-7-lengtj</p>	<p>Math Out of the Box Inside/Outside Lessons 1 – 4</p> <p>EnVision 16-1 pp. 364-365 16-4 pp. 370-373 16-5 pp. 374-375 16-8 pp. 380-383</p> <p>VDOE ESS: 4.7 *Stick Figure Measurement</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>3rd Grading period</p> <p>1 week</p>	<p>SOL 4.6The student will</p> <p>a) estimate and measure weight/mass and describe the results in U.S. Customary and metric units as appropriate; and</p> <p>b) identify equivalent measurements between units within the U.S. Customary system (ounces, pounds, and tons) and between units within the metric system (grams and kilograms).</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Identify equivalent measures between units within the U.S. Customary and between units within the metric measurements. Determine an appropriate unit of measure (e.g., ounce, pound, ton, gram, kilogram) to use when measuring everyday objects in both metric and U.S. Customary units. Measure objects in both metric and U.S. Customary units (e.g., ounce, pound, ton, gram, or kilogram) to the nearest appropriate measure, using a variety of measuring instruments. Record the mass of an object including the appropriate unit of measure (e.g., 24 grams). 	<p>Mass</p> <p>Weight</p> <p>Scales</p> <p>Balance</p> <p>Units</p> <p>Measure</p> <p>US Customary</p> <p>Metric System</p> <p>Conversions</p> <p>Ball park comparisons</p> <p>Ounces</p> <p>Pounds</p> <p>Grams</p> <p>Kilograms</p>	<p>Balances</p> <p>Scales</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Weight/Mass Lessons</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/sol-4-6-weight-and-mass</p>	<p>Math Out of the Box Inside/Outside Lessons: 17 – 20</p> <p>EnVision 16-3 pp. 368-369 16-4 pp. 370-373 16-7 pp. 378-379</p> <p>VDOE ESS: 4.6 *This Fruit is a Mass!</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>3rd Grading period</p> <p>1 week</p>	<p>SOL 4.8</p> <p>The student will</p> <p>a) estimate and measure liquid volume and describe the results in U.S. Customary units; and</p> <p>b) identify equivalent measurements between units within the U.S. Customary system (cups, pints, quarts, and gallons).</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Determine an appropriate unit of measure (cups, pints, quarts, gallons) to use when measuring liquid volume in U.S. Customary units. Estimate the liquid volume of containers in U.S. Customary units of measure to the nearest cup, pint, quart, and gallon. Measure the liquid volume of everyday objects in U.S. Customary units, including cups, pints, quarts, and gallons, and record the volume including the appropriate unit of measure (e.g., 24 gallons). Identify equivalent measures of volume between units within the U.S. Customary system 	<p>Liquid volume</p> <p>Benchmark</p> <p>Ball park comparisons</p> <p>Cups</p> <p>Pints</p> <p>Quarts</p> <p>Gallons</p> <p>Unit of measurement</p> <p>US Customary</p>	<p>Cups</p> <p>Pints</p> <p>Quarts</p> <p>Gallons</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Liquid Volume Lessons https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-8-volume</p>	<p>Math Out of the Box Inside/Outside Lessons 15 – 16</p> <p>EnVision 16-2 pp. 366-367 16-4 pp. 370-373</p> <p>VDOE ESS: 4.8 *Kiddy Pool</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Maipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>3rd Grading period</p> <p>2 weeks</p>	<p>SOL 4.9</p> <p>The student will determine elapsed time in hours and minutes within a 12-hour period.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Determine the elapsed time in hours and minutes within a 12-hour period (times can cross between a.m. and p.m.). Solve practical problems in relation to time that has elapsed. 	<p>Elapsed time</p> <p>Hour</p> <p>Minute</p> <p>O'clock</p> <p>Quarter past</p> <p>Quarter till</p> <p>Half</p> <p>A.M.</p> <p>P.M.</p> <p>Midnight</p> <p>Noon</p> <p>Counting on</p> <p>Analog</p> <p>Digital</p> <p>Increments</p> <p>Time period</p>	<p>Analog Clock</p> <p>Digital Clock</p> <p>Timelines</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Elapsed Time Lesson</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-9-elapsed-time</p>	<p>Math Out of the Box Inside/Outside Lessons 12-14, 20</p> <p>EnVision 16-10 pp. 386-389</p> <p>VDOE ESS: 4.9 *How Much Longer?</p>	<p>STAR Math</p> <p>Teacher Made Assessments</p> <p>Benchmark Tests</p>	


Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>4th Grading period</p> <p>1 week</p>	<p>SOL 4.10</p> <p>The student will</p> <p>a) identify and describe representations of points, lines, line segments, rays, and angles, including endpoints and vertices; and</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Identify and describe representations of points, lines, line segments, rays, and angles, including endpoints and vertices. 	<p>Point</p> <p>Line</p> <p>Line segment</p> <p>Ray</p> <p>Endpoint</p> <p>Collection of points</p> <p>Infinitely</p> <p>Angle</p> <p>Vertices</p> <p>Vertex</p>	<p>Dinah Zikes Foldables</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Points, Lines, Line Segments, Rays, Angles, Endpoints, or Vertices Lessons</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-10-lines</p>	<p>Math Out of the Box</p> <p>EnVision 9-1 pp. 196-197 9-2 pp. 198-199 15-1 pp. 346-349</p> <p>VDOE ESS: 4.10a *Simple Drawings</p>	<p>STAR Math</p> <p>Teacher Made Assessments</p>	

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>4th Grading period</p> <p>1 week</p>	<p>SOL 4.10</p> <p>The student will</p> <p>b) identify representations of lines that illustrate intersection, parallelism, and perpendicularity.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Identify practical situations that illustrate parallel, intersecting, and perpendicular lines. 	<p>Parallel lines</p> <p>Parallelism</p> <p>Intersecting lines</p> <p>Intersection</p> <p>Perpendicular lines</p> <p>Right angles</p> <p>Square corners</p> <p>Plane</p> <p>Illustrate</p>	<p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Intersecting, Parallel, or Perpendicular Lines Lessons</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-10-lines</p>	<p>Math Out of the Box</p> <p>EnVision 9-1 pp. 196-197</p> <p>VDOE ESS: 4.10a *Simple Drawings</p>	<p>STAR Math</p> <p>Teacher Made Assessments</p>	

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>4th Grading period</p> <p>1 week</p>	<p>SOL 4.12</p> <p>The student will</p> <p>a) define <i>polygon</i>; and</p> <p>b) identify polygons with 10 or fewer sides.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Identify polygons with 10 or fewer sides in everyday situations. Identify polygons with 10 or fewer sides in multiple orientations (rotations, reflections, and translations of the polygons). Define and identify properties of polygons with 10 or fewer sides. Identify polygons by name with 10 or fewer sides in multiple orientations (rotations, reflections, and translations of the polygons). 	<p>Polygon</p> <p>Triangle</p> <p>Quadrilateral</p> <p>Rectangle</p> <p>Square</p> <p>Trapezoid</p> <p>Parallelogram</p> <p>Rhombus</p> <p>Pentagon</p> <p>Hexagon</p> <p>Heptagon</p> <p>Octagon</p> <p>Nonagon</p> <p>Decagon</p> <p>Rotation</p> <p>Reflection</p> <p>Translation</p>	<p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Polygon Lessons</p>	<p>Math Out of the Box Corners/Containers Lessons: 5,6,11</p> <p>EnVision 9-4 pp. 202-203 9-5 pp. 204-205 9-6 pp. 206-207</p> <p>VDOE ESS: 4.12 *Polygons Galore! *Geometric Figures</p>	<p>STAR Math</p> <p>Teacher Made Assessments</p>	

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>4th Grading period</p> <p>1 week</p>	<p>SOL 4.11</p> <p>The student will</p> <p>a) investigate congruence of plane figures after geometric transformations, such as reflection, translation, and rotation, using mirrors, paper folding, and tracing; and</p> <p>b) recognize the images of figures resulting from geometric transformations, such as translation, reflection, and rotation.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Recognize the congruence of plane figures resulting from geometric transformations such as translation, reflection, and rotation, using mirrors, paper folding and tracing. 	<p>2-Dimensional shapes</p> <p>Plane shapes</p> <p>Congruent</p> <p>Noncongruent</p> <p>Transformation</p> <p>Translation (slide)</p> <p>Reflection (flip)</p> <p>A line of reflection</p> <p>Rotation (turn)</p>	<p>Mirrors</p> <p>Paper folding</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Plane Figures Lessons Geometric</p> <p>Transformations Lessons Congruency Lessons</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-11-geometric-transformation</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4-12-polygons</p>	<p>Math Out of the Box Corners/Containers Lessons: 13 - 15</p> <p>EnVision 19-1 pp. 448-449 19-2 pp. 450-451 19-3 pp. 452-453 19-4 pp. 454-455</p> <p>VDOE ESS: 4.11 *Congruent Figures</p>	<p>STAR Math</p> <p>Teacher Made Assessments</p>	

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>4th Grading period</p> <p>1 week</p>	<p>21</p> <p>SOL 4.13 The student will</p> <p>a) predict the likelihood of an outcome of a simple event; and</p> <p>b) represent probability as a number between 0 and 1, inclusive.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Model and determine all possible outcomes of a given simple event where there are no more than 24 possible outcomes, using a variety of manipulatives, such as coins, number cubes, and spinners. Write the probability of a given simple event as a fraction, where the total number of possible outcomes is 24 or fewer. Identify the likelihood of an event occurring and relate it to its fractional representation (e.g., impossible/0; equally likely/$\frac{1}{2}$; certain/1). Determine the outcome of an event that is least likely to occur (less than half) or most likely to occur (greater than half) when the number of possible outcomes is 24 or less. Represent probability as a point between 0 and 1, inclusively, on a number line. 	<p>Probability</p> <p>Likely</p> <p>Unlikely</p> <p>Certain</p> <p>Impossible</p> <p>Events</p> <p>Outcomes</p> <p>Favorable outcomes</p> <p>Possible outcomes</p> <p>Ratio</p> <p>Fraction</p> <p>Trials</p> <p>Experiments</p> <p>Chances</p> <p>Occurring</p> <p>Simple events</p> <p>Equally likely</p>	<p>Coins</p> <p>Number Cubes</p> <p>Spinners</p> <p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Probability Lessons</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/4-13-probability</p>	<p>Math Out of the Box Stories/Statements Module B Lessons 19 - 21</p> <p>EnVision 20-3 pp. 472-475</p> <p>VDOE ESS: 4.13 *Lucky Sums? *Spinning Color *Looking For A Pet *How Certain are You?</p>	<p>STAR Math</p> <p>Teacher Made Assessments</p>	

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p> SOL 4.14 The student will collect, organize, display, and interpret data from a variety of graphs.</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Collect data, using, for example, observations, measurement, surveys, scientific experiments, polls, or questionnaires. Organize data into a chart or table. Construct and display data in bar graphs, labeling one axis with equal whole number increments of 1 or more (numerical data) (e.g., 2, 5, 10, or 100) and the other axis with categories related to the title of the graph (categorical data) (e.g., swimming, fishing, boating, and water skiing as the categories of “Favorite Summer Sports”). Construct and display data in line graphs, labeling the vertical axis with equal whole number increments of 1 or more and the horizontal axis with continuous data commonly related to time (e.g., hours, days, months, years, and age). Line graphs will have no more than 10 identified points along a continuum for continuous data. For example, growth charts showing age versus height place age on the horizontal axis (e.g., 1 month, 2 months, 3 months, and 4 months). 	<p>Line graphs</p> <p>Bar graphs</p> <p>Variable</p> <p>Increasing</p> <p>Decreasing</p> <p>Surveys</p> <p>Polls</p> <p>Questionnaires</p> <p>Vertical Axis</p> <p>Horizontal Axis</p> <p>Increments</p> <p>Numerical data</p> <p>Categorical data</p> <p>Continuous data</p> <p>Responses</p>	<p>VDOE Word Wall Voc</p> <p>Dinah Zikes Foldable</p>	<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Graph Lessons</p> <p>https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/data-4-14-data</p>	<p>Math Out of the Box Stories/Statements Module B Lessons: 22-23</p> <p>Signs/Symbols Lessons: 11-13 16-20</p> <p>EnVision 17-1 pp. 402-403 17-2 pp. 404-405 17-3 pp. 406-407 17-5 pp. 410-411 17-9 pp. 418-419</p> <p>ESS: 4.14 *Hot or Cold? *Probability and Statistics</p>	<p>STAR Math</p> <p>Teacher Made Assessments</p>		

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>4th Grading period</p> <p>1 week</p>	<p>4.14 continued</p> <p>The students will use problem solving, mathematical communication, mathematical reasoning, connections, and representations:</p> <ul style="list-style-type: none"> Title or identify the title in a given graph and label or identify the axes. Interpret data from simple line and bar graphs by describing the characteristics of the data and the data as a whole (e.g., the category with the greatest/least, categories with the same number of responses, similarities and differences, the total number). Data points will be limited to 30 and categories to 8. Interpret the data to answer the question posed, and compare the answer to the prediction (e.g., “The summer sport preferred by most is swimming, which is what I predicted before collecting the data.”). Write at least one sentence to describe the analysis and interpretation of the data, identifying parts of the data that have special characteristics, including categories with the greatest, the least, or the same. 	<p>Line graphs</p> <p>Bar graphs</p> <p>Variable</p> <p>Increasing</p> <p>Decreasing</p> <p>Surveys</p> <p>Polls</p> <p>Questionnaires</p> <p>Vertical Axis</p> <p>Horizontal Axis</p> <p>Increments</p> <p>Numerical data</p> <p>Categorical data</p> <p>Continuous data</p> <p>Responses</p>		<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Graph Lessons</p> <p>https://sites.google.com/a/solteacherr.com/olteacher-com/home/4th-grade/4th-grade-math/data-4-14-data</p>			<p>STAR Math</p> <p>Teacher Made Assessments</p>

Pacing / Time Frame	Unit/Learning Focus	Instructional Strategies & Model Lessons					Assessment Items
		Essential Vocabulary	Manipulatives	Technology Resources	Print Resources	Instructional Notes	
<p>4th Grading period</p> <p>Remaind er of the 4th Nine Weeks</p>	<p>All Units Focus: All Math SOLs</p> <p>Math SOLs 4.1 – 4.16 Cumulative Review</p>	<p>See previous vocabulary for each Math SOL</p>		<p>Rockingham County 4th Grade Math website http://www.rockingham.k12.va.us/resources/elementary/4math.htm#15</p> <p>SuccessMaker Review Lessons</p>			<p>STAR Math</p> <p>Teacher Made Assessments</p> <p>SOL Testing</p>

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Web resources

Harcourt Online lessons

http://www.harcourtschool.com/menus/math2004/math2004_gr4.html#0

Gloucester Site by SOL

<http://gets.gc.k12.va.us/elementary/math4.htm>

Teacher site by skill

http://www.wendyseger.com/sol_games.htm

Salem Schools site

<http://www.salemes.vbschools.com/SOLsites.htm>

Smart Exchange

<http://exchange.smarttech.com/curriculum-list.html?curriculum=enuscurr148&grade=enuscurr148gr005&subject=enuscurr148gr005su003>

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SOL Teacher skills by SOL

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math>

Place Value

http://www.internet4classrooms.com/grade_level_help/compose_decompose_math_fourth_4th_grade.htm

http://www.internet4classrooms.com/grade_level_help/write_numbers_math_fourth_4th_grade.htm

<http://exchange.smarttech.com/search.html?q=place%20value%20of%20whole%20numbers>

<http://exchange.smarttech.com/details.html?id=a7a03c07-e19e-45ee-b651-fceb615428f4>

<http://smartboardlessons.blogspot.com/2011/04/smartboard-place-value-lessons-and.html>

Downloadable worksheets

<http://www.homeschoolmath.net/worksheets/fraction-b.php>

<http://www.education.com/worksheets/fourth-grade/math/>

<http://www.tlsbooks.com/>

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Computation practice site

http://www.dositey.com/2008/index.php?page=free_activities&sub=34&subsub=m

Virtual Library of math manipulatives for number and operations

http://nlvm.usu.edu/en/nav/category_g_2_t_1.html

Mixed practice

<http://www.ismartboard.com/third-fourth-fifth-grade/3-4-5-math-smartboard-lessons/>

<http://salem.k12.va.us/itrt/elementary/links/fourth/fourthMath.htm>

Addition and subtraction of Decimals

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/third-grade-math-sol-3-12-adding-subtracting-decimlas>

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4.1a Place Value through the Millions

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4th-grade-sol-4-1a-place-value>

4.1b Comparing

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4-1b-comparing>

4.1c Rounding

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4-1c-rounding>

4.2 Fractions

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4-2-fractions>

4.3a Decimals

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/decimals>

4.3 b Round Decimals

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/4-3-rounding-decimlas>

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4.3 c Compare Decimals

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/sol-4-3c-compare-decimals>

4.3d Decimal Models

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/model-decimals>

4.4a Estimate

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/sol-4-4-math-estimation>

4.4a Add, Subtract & Multiply

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/sol-4-4b-math-crunching-the-numbers>

4.4c Division

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-4c-division>

4.4d Step Problems

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/sol-4-4d-step-problems>

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4.5a Common Multiples & factors

http://webcache.googleusercontent.com/search?q=cache:07Tr_c5xXHMJ:www.authorstream.com/Presentation/glencolvin-99691-factors-gcf-math-powerpoint-education-ppt/+powerpoint+lesson+on+greatest+common+factor&cd=9&hl=en&ct=clnk&gl=us&source=www.google.com

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-5-common-factor>

4.5b Add and Subtract Fractions

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-4b-add-and-subtract-fractions>

4.5c Add & Subtract Decimals

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/third-grade-math-sol-3-12-adding-subtracting-decimlas>

4.5d Step Problems

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-5d-problems>

4.6 Weight & Mass

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/sol-4-6-weight-and-mass>

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Grade Level: **4**

4.7 Length

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-7-length>

4.8 Volume

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-8-volume>

4.9 Elapsed Time

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-9-elapsed-time>

4.10 Lines

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-10-lines>

4.11 Geometric Transformation

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-11-geometric-transformation>

4.11 Polygons

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-4-12-polygons>

Martinsville City Public Schools *Technology Resources*

Content: ***Mathematics***

Grade Level: **4**

4.13 Probability

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/4-13-probability>

4.14 Data

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/data-4-14-data>

4.16a Equality

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/math-sol-4-16a-equality>

4.16b Associative Property

<https://sites.google.com/a/solteacher.com/olteacher-com/home/4th-grade/4th-grade-math/associative-property>

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Harcourt Math

4.1 Place Value of Whole Numbers

4.1 a Chapter 1 Lessons 1-43 ,(pages 2-3, 4-5, 6-9, 86

4.1b Chapter 2 Lessons 2(pages 20-23, 24-27, 28-29, 92-93)

4.1c pages 30-33, 92-93.

4.4 a, b,d Estimate, add and subtract whole numbers Chapters 3 and 4

4.4a, b, d Estimate and find products Chapters 8, 9 and 10

4.4 c Division Chapters 8,9, 13, and 14

4.2 Fractions and Mixed Numbers Understand Fractions Chapter 21

4.5 Add and Subtract Chapter 22

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Harcourt Math

4.3 Understand Decimals Chapter 26

4.5c,d Addition and subtraction Chapter 27

4.6 Measurement of weight and Mass Chapter 24 lesson 5; Chapter 25 lesson 5

4.7 Measurement of length Chapter 24 lessons 1-3; Chapter 25 lessons 1-2

4.8 US capacity liquid volume Chapter 24 lesson 4

4.9 Elapsed Time Chapter 5

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Harcourt Math

4.10 Geometry

4.10a Chapter 17 Lessons 1 and 2

4.10b Chapter 17 Lesson 3

4.11a, b Chapter 19

4.12 Chapter 18

4.13 Probability Chapter 13

4.14 Graphs Chapters 6 and 7

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4.15 Patterns Pages 74-75, 198-199, 205, 214-215, 236-237, 273, 288-289, 316-317, 346-347, 412-414, 636-637

4.16 Equalities 20-23, 24-27,68-69,70-73,76-79,80-81,92-93,174-175, 192-193, 194-195, 194-197, 228-229, 274-275

