

Trimester 1 Timeline	Journal lesson work or assessment(s)	CCSS Connection or rational	Enrichment/Differentiation or cross curricular connection
September			Models
1.1 Intro to SRB	<p>T. p.17 reflexes. Journal p. 1- 4.</p> <p>VC: rows, columns, number models, Commutative Property of Multiplication, turn-around rule</p> <p>Ongoing Assessment: Recognizing student achievement. Math Boxes, Problems 2 and 5, Journal p.4.</p>	<p>Info text tie-in</p> <p>Understanding of place value</p>	<ul style="list-style-type: none"> ➤ Link 1.1 Poetry Connection ➤ Readiness: MMaster p. 7 Following Directions ➤ Extra Practice : 5 minute math. P. 4-5,82-84, and 168-170. ➤ ELL: rows and columns
1.2 Rectangular Arrays	<p>T. p. 22 reflexes. SRB p.10. Journal p.5-8.</p> <p>Ongoing Assessment: Recognizing student achievement. Journal p. 5. Building arrays and identifying factors.</p>	<p>Building base for 5. NBT.6</p>	<ul style="list-style-type: none"> ➤ Link 1.2 Arrays ➤ Kinesthetic Connection(s): Review Commutative property ➤ Use counters to build arrays ➤ Readiness: define rows and columns. MMasters p.9 ➤ Enrichment: Magic square and heterosquare arrays. MMasters p.10 ➤ ELL: Build Array Museum
1.3 Factors	<p>T. p. 28 reflexes. Journal p.10-11.</p> <p>VC: factor, product, factor pair, and multiplication</p> <p>Ongoing Assessment: Recognizing student achievement. Journal p. 10, Problem 2</p>	<p>Building base for 5. NBT.6</p> <p>Identifying factor pairs</p>	<ul style="list-style-type: none"> ➤ Readiness: Factoring Numbers with array cubes. MMasters p.13. Use cm cubes or counters to build arrays ➤ Extra Practice: 5 min math drill ➤ ELL: Making a math word bank ➤ Game: Multiplication Top-It
1.4 The <i>Factor Captor</i> Game	<p>T. p. 33 reflexes Journal p.12- 13. Review the meaning of divisibility SRB p.306. MMasters p.454, Factor Captor Grid</p>	<p>Building base for 5. NBT.6</p>	<ul style="list-style-type: none"> ➤ Students share arrays, Link 1.3 ➤ Study Link 1.4 ➤ Use Fact Triangles to practice facts ➤ Readiness: Exploring Multiplication and Division Relationship ➤ Enrichment: Factor Captor 1-110 Grid

	Ongoing Assessment: Recognizing student achievement. MMaster p. 453 Use Factor Captor Grid 1 to assess. Written response: <i>Describe a strategy for getting the highest score when playing Factor Captor.</i>		
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Lesson 1.5 Divisibility	T. p. 13 reflexes. Using a calculator to test for divisibility . Journal p. 13-15. VC: factor rainbow, quotient, dividend, divisor, quotient, remainder, divisibility, factor rainbow Ongoing Assessment: Recognizing Student Achievement. Math Boxes: Problem 4, Place Value.	Building base for 5. NBT.6 5. NBT.4	<ul style="list-style-type: none"> ➤ Readiness: Practicing Divisibility with counters ➤ Enrichment: Exploring a Test for Divisibility by 4 ➤ ELL: Labeling a Division Number Sentence ➤ Link 1.5 Divisibility Rules ➤ Factor Captor Game ➤ 5.NBT.3a Write Expanded Form in Standard Form Decimals with Thousandths Worksheet
Lesson 1.6 Prime and Composite Numbers	T. p. 43 reflexes. Classifying whole numbers as either prime or composite. Journal p. 16-19. Ongoing Assessment: Recognizing student achievement. Math Message. Use to assess students' ability to factor numbers in the form of arrays. Ongoing Assessment: Informing Instruction. Number line "hops."	Building base for 5. NBT.6	<ul style="list-style-type: none"> ➤ Link 1.6 Prime and Composite Numbers ➤ Enrichment: Goldbach's Conjecture. Prime number investigation. MMasters 18,19 ➤ ➤ Extra Practice: 5 minute math, p. 177.
Lesson 1.7 Square Numbers	T. 48 reflexes. Introduce square number and the exponent key on the calculator. Journal p. 20-22. VC: square arrays, square numbers, exponential notation, exponent key,	Building base for 5. NBT.6	<ul style="list-style-type: none"> ➤ Link 1.7 Exploring Square Numbers ➤ Readiness: Investigating Square Number Facts ➤ Enrichment: Completing Patterns. MMasters p. 21 ➤ Extra Practice: Factor Bingo M. Masters p. 452

	<p>exponent.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Exit slip (MMasters, p. 414) Written Response: <i>Describe a square number and why it is possible to write a square number using an exponent.</i></p> <p>Ongoing Assessment: Informing Instruction. Drawing arrays</p>		
Lesson 1.8 Unsquaring Numbers	<p>T. p. 53 reflexes. Journal P. 23-24</p> <p>VC: unsquaring a number, square root, square root key.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Multiplication facts drill. 50 mixed facts, tables 1-12.</p>	<p>Building base for 5. NBT.6</p>	<ul style="list-style-type: none"> ➤ Link 1.8 Factor Rainbows, Squares, and Square Roots ➤ Enrichment: Comparing numbers and Their Squares. ➤ 5-minute math, p.108
Lesson 1.9 Factor Strings and Prime Factorizations	<p>T.58 reflexes. Factor strings. Journal p. 25-27.</p> <p>Review equivalency concepts for whole numbers to introduce factor strings and prime factorization.</p> <p>VC: factor string, length of the factor string, prime factorization, name collection box</p> <p>Ongoing Assessment: Informing Instruction Make Name Collection Box. Math Message. Write digits in expanded form to work on place value.</p>	<p>Building base for 5. NBT.6</p> <p>Extend name collection boxes with parentheses 5.OA.1</p> <p>5. NBT.3</p>	<ul style="list-style-type: none"> ➤ Link 1.9 Using Factor Tress ➤ Readiness: Sieve of Eratosthenes MMasters p. 26,27 ➤ Enrichment: Exploring Palindromic Squares MMasters p.28 ➤ Factorization Forest MrNussbaum.com <p>5.NBT.3a Write Expanded Form in Standard Form Decimals with Thousandths Worksheet</p>
Lesson1.10	Ongoing Assessment: Recognizing	Understanding of	

<p>Progress check 1</p>	<p>Student Achievement.</p> <ul style="list-style-type: none"> ➤ Building Arrays ➤ Write and id value of digits <p>Performance Assessment: Practice Problem. Open Response</p> <p>Divisibility. Analysis whole group. Show what exemplar would look like. Rubric scored. Areas of: Problem-Solving, Reasoning/Proof, Communication, Connection and Representation.</p>	<p>place value</p> <p>Building base for</p> <p>5. NBT.6</p> <p>5.OA.1</p>	<p>T- created:</p> <ul style="list-style-type: none"> • Building base for: 5. NBT.6 <p>Students build and label array models.</p> <ul style="list-style-type: none"> • 5. NBT.3 See supplemental folder
<p>Lesson 2.1 Estimation Challenge</p> <p>Begin by the last full week in Sept.</p>	<p>T. 81 reflexes. To develop estimation strategies.</p> <p>Journal p. 29-30</p> <p>Adjust to save time: come up with a class median length and the number of steps taken in one minute. Pick a fixed distance for all to use. Example: 1.5 feet per step from Grayling to Mackinaw City.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Extended multiplication facts.</p> <p>VC: estimate, median</p>	<p>5.NBT.5</p> <p>Measurement conversion</p> <p>5.MD.5</p>	<ul style="list-style-type: none"> ➤ Link 2.1 Estimation ➤ Readiness: Id Estimation Strategies MMasters p.34 ➤ Enrichment: Estimating tools M.Masters p.35
<p>Lesson 2.2 Addition of Whole Numbers and Decimals (2 day lesson)</p>	<p>T. p. 86 reflexes. SRB p.230 , 13</p> <p>To review place value-concepts and use of partial-sums and column-addition methods.</p> <p>Journal p. 32 and 34</p> <p>VC: place value, algorithm, partial sums, expanded notation</p>	<p>5.NBT.1</p> <p>5.NBT.3</p> <p>Numbers and decimals in expanded form</p>	<ul style="list-style-type: none"> ➤ Link ➤ Readiness: ➤ Enrichment: ➤ Extra Practice:
<p>Lesson 2.2 Addition of</p>	<p>T. p. 86. Do study Link Follow-Up for 2.1 at top of p.86. Review and discuss</p>	<p>5.NBT.3</p> <p>Numbers and</p>	<ul style="list-style-type: none"> ➤ Link 2.2 Number Hunt ➤ Readiness: Building with Base Ten Blocks MMasters

<p>Whole Numbers and Decimals</p>	<p>column-addition method. Part 2 activities. SRB p.35 Journal p. 33</p> <p>Ongoing Assessment: Recognizing Student Achievement. Extended multiplication facts</p> <p>To review place value-concepts and use of partial-sums and column-addition methods.</p>	<p>decimals in expanded form</p>	<p>p.37</p> <ul style="list-style-type: none"> ➤ Enrichment: Using Place Value to Solve Addition Problems ➤ ELL: Word Bank activity ➤ Extra Practice: Game Addition Top-It
<p>Lesson 2.3 Subtractions of Whole Numbers and Decimals</p>	<p>T. p.92 To review trade-first and partial-difference methods for subtraction. SRB p. 15,16, 35, 17</p> <p>VC: trade-first method, partial differences method</p> <p>Ongoing Assessment: Recognizing Student Achievement. Journal p.35 Problems 1 and 2</p>	<p>5.NBT.1</p> <p>5.NBT.3 Numbers and decimals in expanded form</p> <p>5.NBT.4</p>	<ul style="list-style-type: none"> ➤ Link 2.3 ➤ Readiness: Making and Breaking Apart Numbers MMasters p.40 ➤ Enrichment: Comparing Methods of Subtraction SRB p. 15-17 ➤ Extra Practice: Game Subtraction Target Practice
<p>Lesson 2.4 Addition and Subtraction Number Stories</p>	<p>T.p 98 reflexes. To use mathematical models to solve number stories. Journal p. 37-39</p> <p>VC: variable, open number sentences, relation symbol, operation symbols, true number sentence, false number sentence, solution</p> <p>Ongoing Assessment: Recognizing Student Achievement. Journal p.37 and 38. Problems 1, 3, and 4 to assess writing open number sentences.</p> <p>MMasters p.41, 42 Situation Diagrams,</p>	<p>5.NBT.3 Numbers and decimals in expanded form</p> <p>5.NBT.4</p> <p>5.OA.1</p>	<ul style="list-style-type: none"> ➤ Link 2.4 Open Sentences and Number Stories ➤ Readiness: Using Situation Diagrams MMasters p.44 ➤ Enrichment: Solving Number Stories and Open Number Sentences MMasters p.45 ➤ Extra Practice: Game: Name that Number

	Using Open Numbers Sentences		
Lesson 2.5 Estimate Your Reaction Time	<p>T. p. 104 reflexes. Provide experiences with estimation reaction times with using data landmarks. Link 2.4 Follow-Up. Journal p.40-42</p> <p>VC: stimulus, mean, line plots, mode, range, minimum, maximum</p> <p>Activity Sheet 2, Journal 1 Ongoing Assessment: Recognizing Student Achievement. Comparing decimals.</p> <p>SRB p. 121</p>	<p>5.NBT.3 5.NBT.4</p>	<ul style="list-style-type: none"> ➤ Link 2.5 Comparing Reaction Time ➤ Readiness: Missing Decimals on the Number Line MMasters p.47 ➤ Enrichment: Interpreting Data MMasters p.48 ➤ Extra Practice: Game: Play High Number Toss SRB p.321 ➤ T- constructed WS to compare decimals.
Lesson 2.6 Chance Events	<p>T. p. 110 reflexes. Review vc describing chance and to introduce the Probability Meter. Journal p. 43-46.</p> <p>VC: impossible, certain Ongoing Assessment: Informing Instruction. Denominator as the total.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Exit Slip, written response: <i>Why is the Probability Meter Labeled with fractions, decimals, and percents?</i></p>	<p>5.NBT.4</p>	<ul style="list-style-type: none"> ➤ Link 2.6 How Likely is Rain ➤ Readiness: Comparing Fractions, Decimals and Percents SRB p.398 MMasters p.50 ➤ Enrichment: Making Spinners p.51, 52
Lesson 2.7 Estimating Products	<p>T. p. 116 reflexes. Make and use magnitude estimate for products of multidigit numbers, including decimals. Link 2.6 Follow-Up Journal p. 47-49</p> <p>VC: magnitude estimates</p>	<p>5.NBT.4 5.NBT.5</p>	<ul style="list-style-type: none"> ➤ Link 2.7 Magnitude Estimates ➤ Readiness: Practicing Extended Facts MMasters p.54 ➤ Enrichment: Game: Multiplication Bull-Eye SRB p.323 ➤ Extra Practice: 5-Minute Math p.19,95, and 182 ➤ T- add area model component ➤ Concept emphasis on how estimations are helpful in

	<p>Ongoing Assessment: Informing Instruction.</p> <p>Using place-value chat on p.205 to recognize multiples of powers of 10.</p>		<p>determining the reasonableness of the answer.</p>
<p>Lesson 2.8 Multiplication of Whole Numbers and Decimals</p>	<p>T. 121 reflexes. To review the partial products method for whole numbers and decimals. SRB p.19. Journal p. 50-53</p> <p>VC: partial-products method, magnitude estimate, ballpark estimate.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Journal p. 50, Problems 1-6 to check understanding magnitude estimates.</p>	<p>5.NBT.3 5.NBT.4 5.NBT.5 5.NBT.7 Expanded notation</p>	<ul style="list-style-type: none"> ➤ Link 2.8 A Mental Calculation Strategy ➤ Readiness: <u>MUST DO!</u> Model making: Using Base-10 block models to illustrate partial products. MMasters p. 56, 416, and 417. Need Base 10 set blocks. ➤ Enrichment: Multiplying Numbers that End in 9 MMasters p.57
<p>Lesson 2.9 The Lattice Method of Multiplication</p>	<p>T. p. 126 reflexes. Review and practice multiplication of whole numbers and decimals. SRB p. 20 and 40. Journal p. 54-56</p> <p>MMasters p.56, Lattice Multiplication Table</p> <p>VC: lattice, lattice method</p> <p>Ongoing Assessment: Recognizing Student Achievement. Exit Slip, MMaster p.414 to assess lattice method. <i>Explain how to use the lattice method to solve $82 * 75 = ?$</i></p>	<p>5.NBT.3 5.NBT.4</p>	<ul style="list-style-type: none"> ➤ Link 2.9 Lattice Multiplication ➤ Enrichment: Exploring An Ancient Multiplication Method MMasters p.60 ➤ Extra Practice: 5 Minute Math, multiplying decimals p.186 ➤ Playing Factor Bingo

	<i>And 8.2 * 7.5=?</i>		
Lesson 2.10 Comparing Millions, Billions, and Trillions	T. p.133 reflexes. Compare relative sizes of 1 million, 1 billion, and 1 trillion. Use of samples to make an estimate. 2.9 Link Follow-Up. Journal p.57-58 SRB p. 321 Ongoing Assessment: Recognizing Student Achievement. Use Record Sheet for High Number Toss. MMasters p.487 to assess place value and comparing numbers. VC: sample	5.NBT.1 5.MD.1	<ul style="list-style-type: none"> ➤ Link Link 2.10 ➤ Readiness: Number Toss It MMaster p.491 and 492 Mats SRB p. 326 ➤ Enrichment: Applying Estimation Strategies MMasters p. 62
Lesson 2.11 Progress check Timeline: 3 rd week of October	Ongoing Assessment: Recognizing Student Achievement <ul style="list-style-type: none"> ➤ Performing operations with multi-digit whole numbers and with decimals to the hundredths. ➤ Covert between U.S. Customary units of length. Ongoing Assessment: Recognizing Student Achievement Performance Open Response Assessment: Fund Raising See Rubrics p.63-67 in Assessment Handbook for student samples.	5.NBT.5 5.MD.5	<ul style="list-style-type: none"> ➤ Use Assessment 2.11. p. ➤ Open Response Assessment
Cross Curricular Links		Literature connections: <i>Grandfather Tang's Story</i> by Ann Tompert, Dragonfly Books, 1997	<ul style="list-style-type: none"> ➤ Art: Inscribe a regular hexagon in a circle. ➤ Art: Create tessellations using pattern blocks

		<i>Sir Cumference and the Sword in the Cone</i> by Cindy Neuschwander, Charlesbridge Publishing, 2003	
Lesson 3.1 Introduction to the American Tour	T. p. 155 reflexes. Explore data collection, organization, and interpretation. Journal p.59 SRB p. 369 Journal p. 60 - 61 VC: census Ongoing Assessment: Recognizing Student Achievement. Assess students' ability to read and write large whole numbers. Taking a Class Census MMasters p.67	Lesson to be cut, not integral part of the CCSS. Do assign p. 61, review.	<ul style="list-style-type: none"> ➤ Link Link 3.1 Population Data ➤ Readiness: Reading for Information SRB p.361 MMasters p.69 ➤ Enrichment: Analyzing data MMasters, p.70 and 71 ➤ Extra Practice: High Number Toss Decimal Version SRB p.321
Lesson 3.2 American Tour: Population Data	T. p. 161 reflexes. To provide experiences with interpreting data. Using table data to answer questions. SRB p.370-371. Journal p. 62-63. Journal p. 64-65. Ongoing Assessment: Math Boxes, Problems 1 and 4. Assess students' ability to add and subtract whole numbers and decimals.	Lesson to be cut, not integral part of the CCSS. Do p. 65, review. Optional: M. Masters p. 73 for students weak with place value	<ul style="list-style-type: none"> ➤ Link 3.2 An Unofficial Census ➤ Readiness: Reading Large Numbers, MMasters p.73 ➤ Enrichment: Interpreting patterns from data SRB p. 349, MM p.74 ➤ ELL: Using a Ruler to make reading a table easier ➤ Extra Practice: 5 –Minute math, p. 39 and 117
Lesson 3.3 Exploring Angle Measures	T p. 166 Reflexes. To relate circles and relationships among angles to the degree measures of angles. Journal p. 66-67. Ongoing Assessment: Use journal p. 66 to assess students' ability to use the	5.G.4 Future Link: id relationships between angles.	<ul style="list-style-type: none"> ➤ Link: 3.3 Finding Angle Measures ➤ Readiness: Reviewing ways to name angles. T.168 ➤ Enrichment: Naming Segments, lengths, and Collinear Points. SRB p.141. MM p.76 ➤ Extra Practice: ELL: Using the angles of a square to make a Circle

	<p>relationship between circles and polygons to id angle measures. Should correctly id angle measures in problem 3.</p> <p>VC: \angle means angle. $m\angle B$ is abbreviation for measure of angle B.</p> <p>Need pattern blocks.</p>		<ul style="list-style-type: none"> ➤ Ongoing practice: Game Multiplication Top-It. ➤ ELL: Finding the sum of angles in a rhombus
<p>Lesson 3.4 Using a Protractor</p> <p>This lesson can be extended over a 2 day period as many students need extra review.</p>	<p>T. 171, reflexes. To review types of angles, geometric figures, and the use of the Geometry Template to measure and draw angles.</p> <p>Review VC: acute, obtuse, right, straight, and reflex angles, geometry template, arc</p> <p>Introducing the Geo Template. MM p. 419. SRB p. 162-163. Measuring angles. Journal p.68-69. Interpreting a Bar Graph. Journal p.70</p> <p>Ongoing Assessment: Informing Instruction, measure of angle T (using a straight edge to extend). Data, finding the mean. Use SRB p. 121 to review if needed.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Exit slip: <i>Which is easier to use the full circle or half circle protractor? Why?</i></p>	<p>Supports 5.G. 3 5.G. 4</p>	<ul style="list-style-type: none"> ➤ Link: 3.4 Angle Measures ➤ Readiness: Identifying Points, Lines and Angles. SRB. 141. SS o. 81 ➤ Enrichment: Measuring Baseball Angles ➤ ELL: Building a Math Word Bank ➤ Measuring Angles ➤ Anti-homework Elementary MrNussbaum.com <p>* Spend 2 days reviewing and practicing angle measures.</p>
<p>Lesson 3.5 Using a Compass</p>	<p>T. 178 reflexes. To review compass skills and explore angles formed by intersecting lines.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Use reflexes to assess students' ability to solve extended multiplication facts mentally.</p> <p>Ongoing Assessment: Informing</p>	<p>Supports 5. G.3</p>	<ul style="list-style-type: none"> ➤ Link: 3.5 Angles in Figures ➤ Readiness: Reading a Ruler. MM p. 84 ➤ Enrichment: Inscribing a Hexagon Circle, SRB p. 168. MM p. 85 ➤ Extra Practice: High Number Toss: Decimal Version SRB p. 321 ➤ EEL: Building a Math Word Bank

	<p>Instruction Use of rulers only as a straight edge. VC: radius, diameter, vertical or opposite angles, adjacent angles Finding Lengths with a compass. Measuring angles by using intersecting lines. Journal p. 72-74.</p>		
Lesson 3.6 Congruent Triangles	<p>T. p. 184 reflexes. To explore triangle types and introduce methods for copying triangles. Journal p. 75-78. Boxes p.79. Ongoing Assessment: Recognizing Student Achievement. Math Boxes, problem 3. Assess students' ability to compare decimals. VC: equilateral, isosceles, and scalene triangles, congruent figures Plan ahead: Remove Activity sheets 3 and 4 to cut cards and pieces. Save for Lesson 3.7.</p>	5.G.3	<ul style="list-style-type: none"> ➤ Link: 3.6 Triangle and Angle Review ➤ Ongoing Practice: Game; <i>Angle Tangle</i> SRB p. 296 ➤ Readiness: Playing Triangle Sort, MM p.504 ➤ Enrichment: Playing <i>Sides and Angles: Triangles</i> MM p.502 ➤ Extra Practice: Playing <i>Where Do I Fit In?</i> SRB p.114; MM p. 510 ➤ Create venn diagrams for 5.g.4-SEE SUPPLEMENTAL
Lesson 3.7 Properties of Polygons	<p>T. 190 Reflexes. To explore the geometric properties of polygons. Ongoing Assessment: Recognizing Student Achievement. Journal p. 80 to assess students' ability to recognize relationships between sides and angles in polygons. Ongoing Assessment: Informing Instruction Watch for students who might not be correctly interpreting properties. Journal p. 80. Playing Polygon Capture or variation thereof. Sorting the Polygons by their Properties. Boxes p.81.</p>	5.G.3	<ul style="list-style-type: none"> ➤ Link: 3.7 Sort It Out ➤ Readiness: Sorting attribute blocks by 2 properties ➤ Enrichment: Connecting Vertices. MM p. 88 ➤ ELL Support: <i>What's My Attribute Rule?</i> MM p. 508-509 ➤ Create venn diagrams for 5.g.4 SEE SUPPLEMENTAL

<p>Lesson 3.8 Regular Tessellations</p>	<p>T p. 195 reflexes. To explore side and angle relationships in regular tessellations. May use template or MM p.89 to use regular polygons to make tessellations. Note what it is and what it is not. Journal p. 82-84. Ongoing Assessment: Recognizing Student Achievement. Note student record sheets as they play <i>Angle Tangle</i>. VC: regular polygon, tessellation, regular tessellation, tessellation vertex.</p>	<p>5.G.3</p>	<ul style="list-style-type: none"> ➤ Link: 3.8 Tessellation Museum ➤ Readiness: Making Tessellations with Pattern Blocks (Art connection) ➤ Enrichment: Naming Tessellations, MM p.91 ➤ Extra Practice: Playing <i>Angle Tangle</i> SRB p. 296 ➤ Book Connection: Author M.C. Escher.
<p>Lesson 3.9 Angles of Polygons (2 day lesson)</p>	<p>T. p. 200 reflexes. To develop an approach for finding the angle measurement sum for any polygon. Day 1: complete the math message, Study Link 3.8 follow-up, and explore finding sums of angles. Journal p.85-86-87 Day 2: T. p 202. Dividing Polygons into Triangles and Finding Angle Sums for Any Polygon. Journal p. 87-89 Expanded notation. Journal p.90 boxes p. 91 Ongoing Assessment: Recognizing Student Achievement. Exit Slip: <i>Explain how to find the sum of the measures in polygons without using a protractor.</i> IPad Ap support:</p>	<p>5.G.4 5.MD.2 (under the math message follow-up.</p>	<ul style="list-style-type: none"> ➤ Link: 3.9 Sum of Angle Measures ➤ Enrichment: (Art Connection) Tessellating Quadrangles. MM p. 93 ➤ Extra Practice: Finding Angle Measures in Polygons. MM. 94 ➤ ELL: Describing Tessellations. ➤ T needs to create and extend problems to include expanded forms of numbers. See 5. NBT.3 ➤ Students need practice to read, write and compare decimals to the thousandths. Using base-ten numerals, number names, and expanded forms.- See supplemental for comparing decimal worksheet
<p>Lesson 3.10 Solving Problems</p>	<p>T. p 207. To review polygon attributes and vc using the Geometry Template. Journal p. 92-96. Boxes p. 97.</p>		<ul style="list-style-type: none"> ➤ Link : Link 3.10 Polygons and Their Measures ➤ Readiness: Reviewing Geometry VC ➤ Enrichment: Solving Geometry Template Challenges.

Using the Geometry Template	<p>Ongoing Assessment: Recognizing Student Achievement. Use reflexes to assess students' ability to make magnitude estimates for division with large numbers.</p> <p>VC review: diameter, pentagon, perimeter.</p>		<p>MM p.96-97</p> <ul style="list-style-type: none"> ➤ Extra Practice: Playing <i>Polygon Capture</i> ➤ Extra Practice: 5-minute math. P.53.
Lesson 3.11 Progress Check 3	<p>Ongoing Assessment: Recognizing Student Achievement. Oral and Slate Assessment Rounding Numbers</p> <p>Ongoing Assessment: Recognizing Student Achievement. Open Response: Adding Angles. Assessment Handbook p.169. Multi-step performance. See <i>Assessment Handbook</i> P. 71-75 for rubrics and students' work samples.</p>	<p>5.NBT.4</p> <p>5. G.3</p> <p>5.G.4</p>	<ul style="list-style-type: none"> ➤ T needs to create an assessment in which students will categorize polygons based on their characteristics. Math boxes 3.1-1, 3.3-1, Teaching Master 3.8-Math boxes-3.8-1, 2,
Unit 4 Division Lesson 4.1 Division Facts and Extensions	<p>T. p. 231 reflexes. To review multiplication and division facts and apply basic facts to division with 1- digit divisors.</p> <p>Practicing extended division facts and renaming numbers</p> <p>VC: dividend, divisor, quotient. Multiples.</p> <p>Ongoing Assessment: Informing Instruction</p> <p>Watch for students who use paper and pencil exclusively rather than mental math. Encourage visualization.</p>		<ul style="list-style-type: none"> ➤ Link: 4.1 Uses of Division ➤ Ongoing Practice: playing <i>Name That Number</i> SRB p. 325 ➤ Readiness: Using Equivalent Names for Numbers. MM p. 421 ➤ Enrichment: Exploring More Divisibility Rules. MM p.103 ➤ Extra Practice: 5-minute Math. P.25,28, and 183
4.2 The Partial-Quotients	<p>T. p. 237 reflexes. To review the partial-quotients division algorithm with whole numbers.</p>		<ul style="list-style-type: none"> ➤ Link: 4.2 Division ➤ Readiness: Review Divisibility Rules, SRB p.11 ➤ Enrichment: Exploring Divisibility with Digits, MM

<p>Algorithm Strategies</p> <p>Lesson 4.3 will be skipped. Parts of the lesson will be combined with 4.4.</p>	<p>VC: dividend, divisor, partial quotient SRB p.22 Journal p. 101,102 Ongoing Assessment: Recognizing Student Achievement. Use journal p.101 to check students' ability to interpret remainders. Ongoing Assessment: Informing Instruction Watch for students who use paper and pencil exclusively rather than mental math.</p>		<p>p.105</p> <ul style="list-style-type: none"> ➤ Extra Practice: Remainder Relay-See supplemental file ➤ ELL: Supporting math VC
<p>4.4 Partial-Quotients Algorithm Strategies</p> <p>Note: Take 2 days for this combined lesson.</p>	<p>T. 249 reflexes. Also so assign Journal p. 104 Finding Factors and Box 4.3 p. 105. Can also review measurement and rounding. T. p.246. To provide practice with strategies for the partial-quotients algorithm. Game: SRB p. 302. Divisibility Dash. Review Partial Quotient as it relates to place value. SRB p. 22 VC: dividend, divisor, partial-quotient, dividend Ongoing Assessment: Recognizing Student Achievement. Use journal p.107, problem 10 to assess students' understanding of division. Adequate progress if student can write a number story to be solved with division. *Introduce, practice, and use a standard</p>		<ul style="list-style-type: none"> ➤ Link: 4.4 Division ➤ Readiness: Using Expanded Notation to find Multiples, MM p.112 ➤ Extra Practice: copy MM p. 422, for each S to Practice measuring as found on T. 246. ➤ Extra Practice: Practicing Division, MM p.111 ➤ Division reference: <i>What Your 5th Grader Needs to Know</i> p.276-277.

	<p>division algorithm instead. For example: DMSB (divide, multiple, subtract, bring it down.) Use shortcut method for 1-digit divisors.</p> <p>Journal p. 106, 107,108.</p>		
4.5 Division of Decimal Numbers	<p>T. p. 254 reflexes. *Do Math Message. Use a standard division algorithm. To provide experience with making magnitude estimates for quotients and using the partial-quotients algorithm with decimals. Journal p. 109,110.</p> <p>VC: decimal point, magnitude estimate.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Use journal p.109, problems 2-6 to assess students' ability to make magnitude estimates for division. Look for appropriate number sentences.</p>		<ul style="list-style-type: none"> ➤ Link: 4.5 Estimate and Calculate Quotients ➤ Readiness: Modeling Division with Base-10 Blocks MM p.114 ➤ Enrichment: Exploring a Division Algorithm, SRB p. 24 & 44. MM p.115. ➤ Extra Practice: ➤ ELL: Illustrating Division Algorithms
4.6 Interpreting the Remainder	<p>T. p. 260 reflexes. To provide practice solving division number stories and interpreting remainders. Journal p. 111,112. Place Value puzzles, Journal p. 113. Boxes p.114.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Use journal p.111 and 112 problems 1-3 to assess students' ability to interpret the remainder.</p> <p>Adequate progress if they demonstrate how the remainders affect the solution.</p>		<ul style="list-style-type: none"> ➤ Link: 4.6 Division Number Stories with Remainders ➤ Readiness: Finding Number Story Information, MM p.117 ➤ Enrichment: Writing Division Number Stories ➤ Extra Practice: 5-Minute Math, p. 20, 96, and 97
4.7 Skills Review with <i>First to 100</i>	<p>T. p. 266 reflexes. * Math Message. To investigate the use of variables, review a variety of mathematics skills, and explore division concepts.</p> <p>Ongoing Assessment: Recognizing</p>		<ul style="list-style-type: none"> ➤ Link: 4.7 Variables ➤ Readiness: Solving for Unknown Quantities, MM p.120 ➤ Enrichment: Playing <i>Algebra Election</i>, (S.Studies tie-in on electoral votes.)

	<p>Student Achievement. Use Math Message to assess students' ability to solve for a given variable. Can the correctly assign the value of P.</p> <p>Game: <i>First to 100</i>. SRB. 308 Run MM p.456 and 457. Exploring division with a calculator. Polygon review.</p> <p>Journal p.115-117. Optional enrichment; Journal p.118-119.</p>		<ul style="list-style-type: none"> ➤ Extra Practice: Solving Open Number Sentences, T. 270 ➤ ELL: Building A Math Word Bank
4.8 Progress Check 4	<p>To assess students' progress on mathematical content through the end of Unit 4.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Oral and Slate Assessment T. p. 273</p> <p>Open Response: Assessment Master p.174. <i>Missing Digits</i>. Use Assessment Handbook p.79-83 for scoring rubric and student samples.</p>		<ul style="list-style-type: none"> ➤ Ts to create 3 mini assessments on division with and without remainders.- See supplemental ➤ Division with estimation and decimals. See supplemental ➤ Word stories with division and the interpretation of remainders. a http://www.dadsworksheets.com/v1/Worksheets/WordProblems/Division_Word_Problems_Three_V1.html>Division Word Problems Three Worksheet ➤ http://www.dadsworksheets.com/v1/Worksheets/WordProblems/Division_Word_Problems_Three_V2.html>Division Word Problems Three Worksheet ➤ Problems with variables to solve for and open number sentence problems.
End of 1 st Trimester Administer CA for 1 st Trimester			<ul style="list-style-type: none"> ➤ Ts to administer end of 1st trimester CA. Testing

2nd Trimester. 5th Grade CCSS

Trimester 2 Timeline	Journal lesson work or assessment(s)	CCSS Connection or rational	Enrichment/Differentiation or cross curricular connection
Unit 5 Fractions, Decimals and Percents 5.1 Fraction Review	T. p. 291, reflexes. To review key fraction concepts; and to provide practice with solving parts-and-whole problems and finding fractions parts of whole numbers. SRB p. 57. Journal p. 121-122-123. VC: Whole, ONE, unit, denominator, numerator, unit fraction Ongoing Assessment: Recognizing Student Achievement. Use Journal p. 122, problem 2 to assess students' ability to determine the value of a unit fraction. Ongoing Assessment: Informing Instruction. Watch for student who experience difficulty arranging counters to find the whole from a given fraction. Need about 20 counters per partnership. Remind students to collect museum examples.		Models <ul style="list-style-type: none"> ➤ Link: 5.1 Parts-and-Whole Fraction Practice ➤ Readiness: Identifying Whole-Number Relationships ➤ Enrichment: Id Whole Number, Fraction and Mixed-Number Relationships, MM p.126 ➤ Extra Practice: Playing <i>Fraction Top-It</i>. SRB. 316, MM p.462-263. ➤ ELL: Discussing the Fractions, Decimals, and Percents Museum Display ➤ LARTs: vinculum. Latin, "vinci" to bind. The bar of separation in a fraction.
5.2 Mixed Numbers	T. p. 29, reflexes. To review the whole; and to provide experience with mixed-number and improper fraction concepts. Note "ONE" changes throughout the lesson. Journal p. 124,125, 126. Fractions on a Ruler, J. p. 127. Boxes p. 128.		<ul style="list-style-type: none"> ➤ Link: 5.2 Fraction and Mixed-Number Practice ➤ Readiness:

	<p>Ongoing Assessment: Recognizing Student Achievement. Use journal p. 125, problem 5 to assess students' ability to find the value of a region based on a defined unit fraction.</p> <p>Ongoing Assessment: Informing Instruction. Watch for students who are unsure about pattern block shape names. Highlight words in journals.</p> <p>VC: improper fractions, mixed numbers Need a couple of buckets of Pattern Blocks</p>		<p>Finding Fractions of a whole, MM p. 128</p> <ul style="list-style-type: none"> ➤ Enrichment: Solving Pattern-Block Puzzles, MM p. 129 ➤ Extra Practice: Solving "fraction of" problems
5.3 Comparing and Ordering Fractions	<p>T. p. 303, reflexes. To review equivalent fractions; to compare and order fractions; and to explore fraction addition. Journal p. 129-133.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Use journal p. 129, problem 5 to assess students' understanding of the structure of fractions. Tell difference between the numerator and the denominator.</p> <p>Ongoing Assessment: Informing Instruction. Watch for students who confuse fraction labels with the end of the stick.</p>		<ul style="list-style-type: none"> ➤ Link: 5.3 Fraction-Stick Problems ➤ Readiness: Making Fraction Strips ➤ Enrichment: Exploring Fraction Relationships, MM p.130 ➤ Extra Practice: Game, <i>Fraction Top-It (Addition)</i>. SRB p.316. MM p.462-463. ➤ ELL: Building a Math Word Bank
5.4 Two Rules for Finding Equivalent Fractions	<p>T. p. 309, reflexes. To introduce multiplication and division rules for finding equivalent fractions. Journal p. 134-136.</p> <p>VC: equivalent fractions</p> <p>Ongoing Assessment: Recognizing Student Achievement. Use Exit Slip to assess students' ability to find equivalent fractions. <i>List 3 equivalent fractions for 4/5 and explain how you found them.</i></p>	5.NF.4	<ul style="list-style-type: none"> ➤ Link: 5.4 Equivalent Fractions ➤ Readiness: Exploring Equivalent Fractions ➤ Enrichment: Finding Simplest Form Using

			<p>Division Rule, MM p. 133.</p> <ul style="list-style-type: none"> ➤ Extra Practice: 5-minute math. p.17, Finding Equivalent Fractions ➤ Extra Practice: Playing <i>Factor Captor</i>. SRB p.306, MM p.454-455.
5.5 Fractions and Decimals: Part 1	<p>T. 315, reflexes. To provide practice with renaming fractions as decimals; and to review rounding decimals. Journal p. 137-141.</p> <p>VC: rounding, up, down or to the nearest.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Use reflexes to assess students' ability to convert between equivalent forms. Adequate if they can correctly write the fractions as decimals.</p>	<p>Readiness for 5. NF.1 5.NF.2</p>	<ul style="list-style-type: none"> ➤ Link: 5.5 Decimal Numbers ➤ Readiness: Rounding Numbers, MM p. 136 ➤ Extra Practice: Renaming Fractions as Decimals, MM p. 135 ➤ Extra Practice: Playing <i>Estimation Squeeze</i>. SRB p.304.
5.6 Fractions and Decimals: Part 2	<p>T. p. 320, reflexes. To provide experience with several graphic models for renaming fractions as decimals. Journal p. 142-144. Use inside back cover of Journal1 to complete table of decimal equivalents. Review prime factorization, p.143.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Use Math Boxes, Problem 5 to assess students' ability to compare fractions.</p>	<p>Readiness for 5. NF.1 5.NF.2</p>	<ul style="list-style-type: none"> ➤ Link : 5.6 Decimals, Fractions, and Mixed Numbers ➤ Readiness: Game, version of <i>Number Top-It</i>. (3-Place

	<p>Adequate if fractions are correctly written from least to greatest.</p> <p>Probability Meter Poster, calculators</p>		<p>Decimals) SRB p.327</p> <ul style="list-style-type: none"> ➤ Enrichment: Writing Fraction and Decimal Equivalents for a Shaded 100 Grid, MM p.140-141. ➤ Extra Practice: 5-minute math, Converting Fractions to Decimals and Percents, p. 93.
<p>5.7 Fractions and Decimals: Part 3</p>	<p>T. p. 326, reflexes. To use a calculator to find decimal equivalents for fractions. Game <i>Fract-Tac-Toe (Decimal Version)</i> SRB p. 309-311. MM p. 472 and 474.</p> <p>VC: fractions as division, repeating decimal</p> <p>Ongoing Assessment: Recognizing Student Achievement. Use Journal p. 146, problem 1 to assess students' understanding of fraction and decimal relationships. Students are making adequate progress if their prediction strategies refer to the relative sizes of numerators and denominators and relate these to reasonable decimal equivalents.</p> <p>Ongoing Assessment: Informing Instruction. Watch for students having difficulty organizing work with mixed numbers. T.327</p>	<p>Readiness for 5. NF.1 5.NF.2 5.NF.4</p>	<ul style="list-style-type: none"> ➤ Link 5.7 Decimals Comparisons ➤ Readiness: Recording Decimal Place Value ➤ Enrichment: Extending a Division Algorithm. <p>Opportunity to use standard algorithm annexing zeros in converting fraction to a decimal.</p>

<p>5.8 Using a Calculator to Convert Fractions to Percents</p>	<p>T. p. 332, reflexes. To discuss the meaning and uses of percents; and to introduce using a calculator to convert decimals to percents. Journal p. 147 -149. SRB p. 309, MM p.476</p> <p>VC: percent</p> <p>Ongoing Assessment: Recognizing Student Achievement. Use game to gauge students' ability to recognize percent equivs for fractions.</p> <p>Ongoing Assessment: Informing Instruction. Watch for students who are unclear about how to interpret the calculator display when converting a decimal to a percent. Refer to decimal place-value chart.</p>		<ul style="list-style-type: none"> ➤ Link 5.8 Percent Problems ➤ Readiness: Playing <i>Fraction/Percent Concentration</i> SRB p. 315, MM p.467-468. ➤ Enrichment: Solving "Percent of" Number Stories, MM p.144 ➤ Extra Practice: Writing and Solving Number Stories, MM p. 425 ➤ Extra Practice: Playing <i>2-4-5-10 Frac-Tac-Toe (percent version)</i> ➤ ELL: Building a Math Word Bank ➤ L.ARTS: percent, Latin per centum. "per" meaning for and "centum" meaning one hundred.
<p>5.9 Bar and Circle Graphs</p>	<p>T. p. 338, reflexes. To review the properties and construction of bar graphs; and to discuss the properties of circle graphs. Journal p. 150-152. VC: bar graph, circle graph</p> <p>Ongoing Assessment: Recognizing Student Achievement. Use Math Message to assess students' knowledge of bar and circle graphs. Adequate progress if they are able to id major similarities and differences.</p>		<ul style="list-style-type: none"> ➤ Link: 5.9 Graphs ➤ Readiness: Acting Out Constructing a Circle Graph ➤ Extra Practice: Finding Equivalent Fractions, MM p. 146

			<ul style="list-style-type: none"> ➤ ELL: Comparing Circle and Bar Graphs
5.10 The Percent Circle: Reading Circle Graphs	<p>T. p. 344, reflexes. To introduce the use of the Percent Circle to measure circle graph sectors. Journal p. 153 -156. Measuring angles, perimeter, and area, p. 155.</p> <p>VC: percent circle, sector</p> <p>Ongoing Assessment: Recognizing Student Achievement. Use Journal p. 154 to assess students' ability to estimate and find the percent measure of circle graph sectors. Adequate progress if percents total 100% and reflect understanding of relative size of sectors.</p> <p>Ongoing Assessment: Informing Instruction. Watch for students having difficulty measuring with the percent circle. Center points and the 0% mark must be aligned from the start.</p> <p>Copy percent circles on transparency paper for each student (place 6 copies per page from circle found on MM p.150)</p>		<ul style="list-style-type: none"> ➤ Link: 5.10 Circle Graphs and Collecting Data ➤ Readiness: Making References for Sectors ➤ Enrichment: Conducting an Eye Test, MM p. 426 ➤ Extra Practice: 5-minute math, Converting Fractions to Decimals, p. 181.
5.11 The Percent Circle: Making Circle Graphs	<p>T. p. 350, reflexes. To introduce constructing circle graphs with the use of the Percent Circle. Journal p. 155-159</p> <p>Ongoing Assessment: Recognizing Student Achievement. Exit Slip to assess students' understanding of how to use the data-set fractions to draw circle-graph sectors. <i>How can finding the fraction of the whole for each category in the data set help you construct a circle graph?</i> T. p. 351.</p> <p>Ongoing Assessment: Informing Instruction. Watch for students having difficulty in devising a method for constructing.</p>		<ul style="list-style-type: none"> ➤ Link 5.11 What's in a Landfill ➤ Readiness: Measuring Circle Graph Sectors. MM p.428 ➤ Enrichment: Calculating Percents from Data, T. p. 353-354 ➤ Extra Practice: Playing <i>Fraction Of</i>. MM p.464-466 and 469. SRB p. 313.
5.12	T. p. 356, reflexes. To extend the American Tour with information about		<ul style="list-style-type: none"> ➤ Link : 5.12 Finding

<p>American Tour: School Days</p>	<p>mathematics instruction and related historical problems. SRB p.360-362. Journal p. 160-162. Interpret math in texts and graphs. Ongoing Assessment: Recognizing Student Achievement. Use Math Boxes, problem 1 to assess students' ability to estimate answers. Adequate if students' estimates are reasonable results for the operations. Make sure students have completed Study Link 5.10 to use with lesson 6.1.</p>		<p>“Fractions of” (Word Problems)</p> <ul style="list-style-type: none"> ➤ Readiness: ➤ Enrichment: Reading about Mathematics History (S. Studies Connection, MM p.152) ➤ Extra Practice: Converting Bar Graphs to Circle Graphs ➤ Extra Practice: <i>Playing Name That Number</i> SRB p.325
<p>5.13 Progress Check 5</p>	<p>To assess students' progress on mathematical content through the end of Unit 5. Ongoing Assessment: Recognizing Student Achievement. See assessments to be created by teachers. Open Response: <i>Assessment Handbook</i> p.179. See <i>Assessment Handbook, p.87-91</i> for student rubrics and students' word samples for this problem. Link 5.13 Family Letter for Unit 6. Using Data: Addition and Subtraction of Fractions</p>		<ul style="list-style-type: none"> ➤ Oral and Slate assessments need to be converted to paper assessments. ➤ Fractions to decimals and percents ➤ Comparing and ordering sets of fractions ➤ Convert mixed numbers to improper and improper to mixed ➤ Find equivalents ➤ Add fractions with using stick models ➤ Read and construct circle graphs

<p>Unit 8 Fractions and Ratios</p> <p>8.1 Review: Comparing Fractions</p>	<p>T. p 619, reflexes. To review the use of equivalent fractions in comparisons. Ongoing Assessment: Recognizing Student Achievement. Use MM and reflex problems to assess students' ability. SRB p. 399, 401. Ongoing Assessment: Informing Instruction. Watch for students having trouble in using correct rows for comparison to find decimal equivalents. Journal p. 248, 249. Boxes, p.250. VC: quick common denominator (QCD)</p> <p>Go to the link below. P. 39 and do Exploration 1, Activity 1 http://schools.nyc.gov/NR/ronlyres/B46D0228-1BB5-4E44-A3CB-3A5C81334461/130938/NYCDOEG5Math_TimeforRecess_Final.pdf</p>		<ul style="list-style-type: none"> ➤ Link 8.1 Comparing Fractions ➤ Readiness: Ordering Fractions on a Rope. T. 622 ➤ Enrichment: Exploring least common denominator. MM p.222 ➤ Extra Practice: Playing <i>Build It</i>, SRB p.300 and 399. MM p. 446 and 447 ➤ ELL: Using terms related to common denominators.
<p>8.2 Adding Mixed Numbers</p>	<p>T. 625, reflexes. MM 1-9 top of journal p. 251. To develop addition concepts related to mixed numbers. Journal p. 251-253. . Ongoing Assessment: Informing Instruction. Watch for students having difficulty renaming mixed numbers sums. Discuss and rename fractional parts of mixed numbers. T. p.622</p> <p>Ongoing Assessment: Recognizing Student Achievement. Journal p. 252, problem 4. To assess ability to add mixed number. Exit Slip, explain how you found the answer. Go to the link below. P. 41 (answers p.42) and do Exploration 1, Activity 2 http://schools.nyc.gov/NR/ronlyres/B46D0228-1BB5-4E44-A3CB-3A5C81334461/130938/NYCDOEG5Math_TimeforRecess_Final.pdf</p>	<p>5. NF. 1 5.NF.2</p>	<ul style="list-style-type: none"> ➤ Link 8.2 Adding Mixed Numbers ➤ Readiness: Adding Mixed Numbers, Journal p. 252, T. p. 628 ➤ Enrichment: ➤ Extra Practice: Play <i>Factor Capture</i> MM p. 460, Journal p. 198
<p>8.3 Subtracting Mixed</p>	<p>T. p.631, reflexes. Problems 1-3 Journal p. 254. To develop subtraction concepts related to mixed numbers. Journal p.254-256. Ongoing Assessment: Informing Instruction. Watch for students having</p>	<p>5. NF. 1 5.NF.2</p>	<ul style="list-style-type: none"> ➤ Link 8.3 Subtracting Mixed Numbers

Numbers	<p>difficulty renaming mixed numbers for subtraction. T. 632.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Journal p. 255 to assess ability with adding, subtracting and comparing mixed numbers. AP with 1st 4 number sentences done correctly</p> <p>Go to the link below. P. 43 (answers p. 44) and do Exploration 1, Activity 3</p> <p>http://schools.nyc.gov/NR/ronlyres/B46D0228-1BB5-4E44-A3CB-3A5C81334461/130938/NYCDOEG5Math_TimeforRecess_Final.pdf</p>		<ul style="list-style-type: none"> ➤ Readiness: T. p. 634, counting up ➤ Enrichment: MM p. 225, Addition and Subtraction Pattern ➤ Extra Practice: <i>Mixed Number Spin</i>. Journal p. 255. MM p.488, 489. ➤ Extra Practice: <i>5 minute math</i>, p. 184 and 185.
8.4 Calculator Practice: Computation with Fractions	<p>T. p. 637, reflexes. To provide practice adding fractions with unlike denominators and using a calculator to solve fraction problems.</p> <p>Ongoing Assessment: Recognizing Student Achievement. MM p. 459. Order fractions from least to greatest.</p> <p>Introduce <i>Fraction Action, Fraction Friction</i></p> <p>SRB p. 312, MM p. 459.</p> <p>SRB p.260-263. Exploring Fraction- Operations Keys on a calculator. Journal p. 257-258.</p> <p>Go to the link below. P. 44 and do Exploration 1, Activity 4 and transition problem p. 47.</p> <p>http://schools.nyc.gov/NR/ronlyres/B46D0228-1BB5-4E44-A3CB-3A5C81334461/130938/NYCDOEG5Math_TimeforRecess_Final.pdf</p>		<ul style="list-style-type: none"> ➤ Link : 8.4 More Fraction Problems ➤ Readiness: Flow chart for charting common denominators ➤ Enrichment: Exploring Equivalent Fractions, MM p.228 ➤ Extra Practice: 5 Minute Math p. 26, 98, 99, 113.
8.5 Fractions	T. p. 643, reflexes. MM journal p. 259, 1-11. To introduce finding the	5.NF.6	➤ Link: Fractions of

of Fractions	<p>fraction of a fraction. *Note: terms “many of” and “part of” closely related to multiplication. Ongoing Assessment: Recognizing Student Achievement. Journal p. 259, problems 1-11 to assess students’ understanding of fractional parts on a number line. AP if 1-6 are correct. VC: Horizontal, vertical. Advanced prep: sheets of paper for folding models. Journal p. 260-262, Boxes p. 263.</p> <p>Go to the link below. P. 49 and do Exploration 2, Investigation 5. http://schools.nyc.gov/NR/ronlyres/B46D0228-1BB5-4E44-A3CB-3A5C81334461/130938/NYCDOEG5Math_TimeforRecess_Final.pdf</p>		<p>Fraction</p> <ul style="list-style-type: none"> ➤ Readiness: Modeling Equivalent Fractions, MM p. 230. ➤ Enrichment: Summing the Squares. T. p. 648. ➤ Extra Practice: Play <i>Fraction Spin</i>. Journal p.262, MM 471. ➤ ELL: word Bank
8.6 An Area Model for Fraction Multiplication	<p>T. p.650, reflexes. To develop a fraction multiplication algorithm. Journal p. 265-266. Boxes p. 267. VC: Multiplication, area model Ongoing Assessment: Informing Instruction. Look for trouble with sketching area models. Use paper folding method to help. Ongoing Assessment: Recognizing Student Achievement. Journal p. 265 to check understanding.</p> <p>Go to the link below. P. 51 and do Exploration 2, Investigation 6. http://schools.nyc.gov/NR/ronlyres/B46D0228-1BB5-4E44-A3CB-3A5C81334461/130938/NYCDOEG5Math_TimeforRecess_Final.pdf</p>	5.NF.6	<ul style="list-style-type: none"> ➤ Link : 8.6 Multiplying Fractions ➤ Readiness: Fraction Multiplication, MM p. 233 ➤ Extra Practice: Multiplying fractions, MM p.234
8.7 Multiplication of Fractions and Whole	<p>T. 655, reflexes. To provide experience finding the product of a whole number and a fraction. Ongoing Assessment: Recognizing Student Achievement. Journal p. 271 problem 1. Write a response: <i>Convert the fractions to decimals and</i></p>	5.NF.6	<ul style="list-style-type: none"> ➤ Link: 8.7 Multiplying Fractions and Whole numbers

Numbers	<p><i>explain your solution strategy.</i> Journal p. 268-270, Boxes p. 271.</p> <p>Go to the link below. P. 53 and do Exploration 2, Investigation 7. http://schools.nyc.gov/NR/ronlyres/B46D0228-1BB5-4E44-A3CB-3A5C81334461/130938/NYCDOEG5Math_TimeforRecess_Final.pdf</p>		<ul style="list-style-type: none"> ➤ Readiness: Writing whole numbers as fractions, T. p. 658 ➤ Enrichment: Simplifying Fractions Factors, MM. 236. ➤ Extra Practice: Play <i>Name that Number</i>, SRB p. 325. ➤ Extra Practice: 5-Minute, p. 23 and 185
8.8 Multiplication of Fractions Mixed Numbers	<p>T. 660, reflexes. To introduce multiplication with mixed numbers. <i>Ongoing Assessment: Informing Instruction. Watch students having difficulty with partial products. Diagram as on p. T. 661.</i> <i>Ongoing Assessment: Recognizing Student Achievement. Journal p. 273, problem 5. Explain your solution.</i> Journal p.273-275. Boxes p. 276.</p> <p>Go to the link below. P. 55 and do Exploration 2, Investigation 8. http://schools.nyc.gov/NR/ronlyres/B46D0228-1BB5-4E44-A3CB-3A5C81334461/130938/NYCDOEG5Math_TimeforRecess_Final.pdf</p>	5.NF.6	<ul style="list-style-type: none"> ➤ Link: 8.8 Multiplying Fractions and mixed Numbers ➤ Readiness: Ordering Improper Fractions. T. p. 663. ➤ Extra Practice: Play <i>Frac-Tac-Toe</i>. SRB p. 309-311, MM p. 472-484
8.9 Finding the Percent of a Number	<p>T. p. 665, reflexes. To broaden students' understanding of calculating percents to include discounts. <i>Ongoing Assessment: Recognizing Student Achievement. Use reflexes to assess ability to convert between fractions, decimals, and percents. Express fractions in simplest form. AP to write fraction and decimal forms correctly.</i> Journal p. 277-278. Boxes p. 279</p>		<ul style="list-style-type: none"> ➤ Link: 8.9 Fractions, Decimals and Percents. ➤ Readiness: Finding the Percent of a Number, MM p. 239.

	<p>Need calculators for checking.</p> <p>Go to the link below. P. 57 and do Exploration 2, Investigation 9. http://schools.nyc.gov/NR/ronlyres/B46D0228-1BB5-4E44-A3CB-3A5C81334461/130938/NYCDOEG5Math_TimeforRecess_Final.pdf</p> <p>Investigation 9 may be used as a formative assessment.</p>		<ul style="list-style-type: none"> ➤ Enrichment: Calculating Discounts, MM p. 240.
8.10 Relating Fractional Units to the Whole	<p>T. p. 669. To provide practice finding the whole, given a fraction or a percent of the whole. VC: unit fraction, unit percent. (Any fraction with 1 as the numerator, 1% of the whole.) Ongoing Assessment: Recognizing Student Achievement. Use journal p. 280 to assess use of unit fractions and unit percents. AP if correctly solve problems 1-6. Math Journal p. 281 and 282. Boxes p. 283. SRB p. 52. MM, p. 435.</p> <p>Go to the link below. P. 59 and do Exploration 3, Investigation 10. http://schools.nyc.gov/NR/ronlyres/B46D0228-1BB5-4E44-A3CB-3A5C81334461/130938/NYCDOEG5Math_TimeforRecess_Final.pdf</p>	5.NF.7	<ul style="list-style-type: none"> ➤ Link: 8.10 Unit Fractions ➤ Readiness: Might draw pics to help solve. T. p. 671. Fraction of and % of a Number, MM p. 242. ➤ Enrichment: Finding the Fraction and % of a Number, MM p. 243 ➤ Extra Practice: Play <i>Factor Captor</i>. SRB p. 306, MM p. 454-455.
8.11 American Tour: Rural and Urban	<p>T. p. 674. To provide experience with locating information on maps and charts and using percents. to make estimates. Investigating data. SRB p. 350,351, and 376. Journal p. 284-286. Boxes p. 287. Classroom survey, MM p. 244.</p>		<ul style="list-style-type: none"> ➤ Link: 8.11 Fraction Review ➤ Readiness: Using a calculator to find

	<p>VC: rural, urban.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Check record sheet for <i>Factor Captor</i> to assess use of equivalent fractions. AP if they record fraction pairs with sums greater than $\frac{1}{2}$. MM p. 461.</p> <p>Go to the link below. P. 61 and do Exploration 3, Investigation 11. http://schools.nyc.gov/NR/rdonlyres/B46D0228-1BB5-4E44-A3CB-3A5C81334461/130938/NYCDOEG5Math_TimeforRecess_Final.pdf</p>		<p>% of a number, SRB p. 50,53; MM p. 246</p> <ul style="list-style-type: none"> ➤ Enrichment: Charting changes in food consumption. ➤ Extra Practice: Play <i>Factor Captor</i>, journal p. 198; MM p.460,461
<p>8.12 Fraction Division</p> <p>Add 2 additional days for division of fractions exploration</p>	<p>T. p. 681, reflexes. Journal p. 288, 1-4. To introduce division of fractions and mixed numbers. Journal p. 288-289. Boxes, p. 290.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Journal p. 289, problem 13 to assess common denominator algorithm for division of fractions. AP to rename mixed number as a fraction.</p> <p>VC: reciprocal</p>	<p>5.NF.7</p> <p>*Ts need to add activities or problems of division. See 5.NF.7a and 5.NF.7b</p>	<ul style="list-style-type: none"> ➤ Link: 8.12 Mixed-Number Review ➤ Readiness: Play <i>Build-It</i>, SRB p. 300; M p. 446,447. ➤ Enrichment: Exploring the Meaning of Reciprocal, MM p. 249
<p>8.13 Progress Check 8</p>	<p>T. 687.</p> <p>Ongoing Assessment: Recognizing Student Achievement. Assessment handbook, p. 190- 192 Boxes p. 291 Open Response: (Performance Assessment)</p>		<p>Need to develop more practice and assessment checks for the division of fractions.</p> <p>T- created mini assessments of addition and subtraction with unlike</p>

			denominators. (Downloaded from EdHelper.) T-created mini assessments of multiplication of fractions by fractions, fractions by whole numbers (Edhelper) Divison of fractions by fractions and whole numbers. (t-made)
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