

Grade 3 Curriculum Map

Unit/Timeframe: Topic 1 – Numerations (Conceptual Unit: Topics 1, 2, & 3) Approximately 8 weeks for the conceptual unit		Grade Level: 3
Additional Notes		
<p>*Please consider this as a part of a three-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).</p>		
Content Standards		2011 MA Curriculum Framework for Literacy
<p>2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.</p> <p>3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems</p> <p>3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.</p> <p>3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p>4.NBT.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p>		N/A
Essential Questions	Knowledge/Concepts	Skills
How are multi-digit numbers read and written? How can whole numbers be compared and ordered?	<p>Misconceptions: Number lines don't always have to start at 0 and are not always horizontal</p>	<p>Student will be able to:</p> <p>Use number lines to locate whole numbers.</p> <p>Recognize that an equal distance on a number</p>

	<p>Knowing which 2 tens or hundreds a number falls between on a number line</p> <p>Rounding is not the same as estimating</p> <p>Need to use base 10 blocks to round...lots of practice with special cases using 9's in the various rounding places</p> <p>Students need a lot of real world experiences in "why" we might need to know how to round (e.g. – during book fair we round up the cost of the books to make sure we have enough money to cover tax.)</p>	<p>line corresponds to equal differences in the numbers.</p> <p>Skip count on a number line and recognize the patterns.</p> <p>Use place value understanding to round whole numbers to nearest 10 or 100.</p> <p>Compare and order whole numbers based on properties of place value and using number lines.</p>
Common Resources		Common Assessments
<p>**You may choose to use Lesson 2-5 on rounding in Topic 1.</p> <p>Students will need more than one day on rounding. We suggest using supplemental resources.</p> <p>Base 10 blocks Number lines Place value charts List of number words Rounding chart Accordion number line Place value template http://www.k-5mathteachingresources.com/3rd-grade-number-activities.html http://www.commoncoresheets.com/</p>		

Math Reads:*1001 Bugs to Spot**The 512 Ants on Sullivan Street**How Much, How Many, How Far, How Heavy, How Long, How Tall is 1,000?*

Lesson	Standard	Notes	Interventions
1-1	2NBT3	Use place value blocks	A89,91
1-2	2NBT3	Use place value blocks	A94
1-3 (optional)	4NBT2	A91 is good to use for everyone	A91
1-4	3NBT1	See Unpacked Standards	A87,88
1-5	3NBT1, 3MD3		A87, 88
2-5 (optional here or in Topic 2)	3NBT1	Need more than 1 day on rounding	A90, 92, C26,30,32
1-6	2NBT4, 4NBT2	Symbols <, > and = are introduced	A93
1-7	2NBT4, 4NBT2		A93
1-8 (OMIT)		This teaches a problem solving strategy that can be taught elsewhere.	

Vocabulary

Digits, place value , standard form, expanded form, word form, compare, order, rounding, ones period, hundreds period, thousands period, number, value, place

Unit/Timeframe: Topic 2 — Number Sense: Addition and Subtraction (Conceptual Unit: Topics 1, 2, & 3) Approximately 8 weeks for the conceptual unit		Grade Level: 3
Additional Notes		
*Please consider this as a part of a three-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).		
Content Standards		2011 MA Curriculum Framework for Literacy
3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. 3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity 3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations		N/A
Essential Questions	Knowledge/Concepts	Skills
How can sums and differences be found mentally? How can sums and differences be estimated?	Understand and use addition properties to fluently add Misconceptions: Students do not need to use the formal terms for properties, but should be exposed to the terms on anchor charts and teacher instruction, but not on assessment Students need to use concrete materials	Students will be able to: Use mental math to add and subtract. Estimate sums and differences. Recognize situations when addition or subtraction is used to solve word problems/story problems. Be able to write corresponding number sentences for word problems/story problems.

	<p>(counters, etc.) to represent properties</p> <p>Important that students understand that a number sentence is also called an equation. An equation must have an equal sign. Students learn in first grade that equal doesn't mean "the answer is" but instead means "same amount. The equal sign represents a balance between the two sides of the equal sign.</p>	<p>Recognize a letter, question mark, or empty box may replace an unknown value in equations.</p>												
Common Resources		Common Assessments												
<p>Continue mental math throughout the year Counters for students to investigate properties Balance for showing equality White boards Bar diagrams Scale graphic organizer http://www.k-5mathteachingresources.com/3rd-grade-number-activities.html http://www.commoncoresheets.com/</p> <p>Math Reads: <i>1001 Bugs to Spot</i> <i>The 512 Ants on Sullivan Street</i> <i>How Much, How Many, How Far, How Heavy, How Long, How Tall is 1,000?</i></p> <table border="1" data-bbox="191 1149 1167 1421"> <thead> <tr> <th>Lesson</th> <th>Standard</th> <th>Notes</th> <th>Intervention</th> </tr> </thead> <tbody> <tr> <td>2-1</td> <td>3.NBT.2</td> <td>Concepts in the following lessons will need to be revisited throughout the year.</td> <td>B41</td> </tr> <tr> <td>2-2</td> <td>3.NBT.2</td> <td>There are 8 fact family number sentences, not</td> <td>B42</td> </tr> </tbody> </table>		Lesson	Standard	Notes	Intervention	2-1	3.NBT.2	Concepts in the following lessons will need to be revisited throughout the year.	B41	2-2	3.NBT.2	There are 8 fact family number sentences, not	B42	<p>Check for understanding of doubling strategies</p>
Lesson	Standard	Notes	Intervention											
2-1	3.NBT.2	Concepts in the following lessons will need to be revisited throughout the year.	B41											
2-2	3.NBT.2	There are 8 fact family number sentences, not	B42											

		4			
2-3 and 2-4	3.NBT.2	Choose the problems that are best for mental math	C26,27,32		
2-5		Do if not done with Topic 1			
2-6	3.NBT.2	Do without compatible numbers	C30		
2-7	3.NBT.2 3.OA.8	Do without compatible numbers. Remind students to estimate daily.	C31		
2-8	3.NBT.2	Use scale graphic organizer	B42		
2-9	3.OA.8, 3.OA.9		E32		
Vocabulary					
Addends, sum, commutative property of addition, associative property of addition, identity property of addition, difference, fact family, estimate, equation					

Unit/Timeframe: Topic 3 – Using Place Value to Add and Subtract (Conceptual Unit: Topics 1, 2, & 3) Approximately 8 weeks for the conceptual unit		Grade Level: 3
Additional Notes		
*Please consider this as a part of a three-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).		
Content Standards		2011 MA Curriculum Framework for Literacy
3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. 3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity		N/A
Essential Questions	Knowledge/Concepts	Skills
What are standard procedures for adding and subtracting whole numbers?	Anticipated Misconceptions: We are not borrowing or carrying. It is regrouping. Stressing the place values when regrouping When subtracting across zeros students often take the short-cut of writing 9 rather than 10 first The minus symbol says minus, not take away. Not all subtraction scenarios are “take away.”	Students will be able to: Add/subtract within 1,000. Use expanded algorithm to add and subtract. Use place value blocks to add and subtract. Use a strategy such as drawing to solve addition/subtraction problems. Subtract across zeros. Use the relationship between addition and subtraction to solve and check.

				Estimate to check reasonableness of answer.
Common Resources				Common Assessments
http://www.k-5mathteachingresources.com/3rd-grade-number-activities.html http://www.commoncoresheets.com/ Base ten blocks Graph paper Digi blocks Lined paper Number lines Math Reads: <i>1001 Bugs to Spot</i> <i>The 512 Ants on Sullivan Street</i> <i>How Much, How Many, How Far, How Heavy, How Long, How Tall is 1,000?</i>				
Lesson	Standard	Notes	Intervention	
3-1	NBT.2	Use place value blocks	C4, C28	
3-2	NBT.2	Use place value blocks	C33	
3-3	NBT.2	Students do not need to master the standard algorithm until 4 th grade.	C33	
3-4	NBT.2	See above	C37	
3-5	OA.8	Draw a picture	E25	
3-6	NBT.2	Use place value blocks	C17, C29	
3-7	NBT.2	See above	C34	
3-8	NBT.2	Students do not need to master the standard algorithm until 4 th grade.	C34	

3-9	NBT.2	See possible misconceptions	C39		
3-10	OA.8	Draw a picture, write a number sentence	E25		
Vocabulary					
No new vocabulary, refer to previous topics					

Unit/Timeframe: Topic 4 – The Meanings of Multiplication (Conceptual Unit: Topics 4, 5, & 6) Approximately 5 weeks for the conceptual unit		Grade Level: 3
Additional Notes		
*Please consider this as a part of a three-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).		
Content Standards		2011 MA Curriculum Framework for Literacy
3.OA.1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. 3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. 3.OA.5 Apply properties of operations as strategies to multiply and divide.		N/A
Essential Questions	Knowledge/Concepts	Skills
What are different meanings of multiplication? How are addition and multiplication related?	Understand the relationship between multiplication and arrays Understand the commutative property	Students will be able to: Write multiplication sentences to match repeated addition.

	<p>Anticipated misconceptions:</p> <p>Students do not think that the groups must be equal. Students do not make equal groups.</p> <p>Students have difficulty knowing which factor is the number of groups</p> <p>When making arrays, students do not always count the first row (or column)</p> <p>Students confuse row and column</p>	<p>Write multiplication stories.</p> <p>Solve multiplication problems.</p> <p>Create a visual to represent a multiplication problem such as an array, skip counting, repeated addition, or a picture.</p>																
Common Resources		Common Assessments																
<p>http://www.k-5mathteachingresources.com/3rd-grade-number-activities.html</p> <p>http://www.commoncoresheets.com/</p> <p>Math Reads:</p> <p><i>1001 Bugs to Spot</i> <i>The 512 Ants on Sullivan Street</i> <i>Amanda Bean's Amazing Dream</i> <i>The Best of Times</i> <i>Cheetah Math</i> <i>Minnie's Diner</i></p> <table border="1" data-bbox="191 1227 1022 1388"> <thead> <tr> <th>Lesson</th> <th>Standard</th> <th>Notes</th> <th>Intervention</th> </tr> </thead> <tbody> <tr> <td>4-1</td> <td>OA.1</td> <td></td> <td>B43</td> </tr> <tr> <td>4-2</td> <td>OA.3</td> <td></td> <td>B44</td> </tr> <tr> <td>4-3</td> <td>OA.5</td> <td></td> <td>B44</td> </tr> </tbody> </table>		Lesson	Standard	Notes	Intervention	4-1	OA.1		B43	4-2	OA.3		B44	4-3	OA.5		B44	
Lesson	Standard	Notes	Intervention															
4-1	OA.1		B43															
4-2	OA.3		B44															
4-3	OA.5		B44															

4-4	OA.3		B46		
4-5	OA.1		E33		
Vocabulary					
Multiplication, factor, product, array, row, column, commutative property					

Unit/Timeframe: Topic 5 – Multiplication Facts: Use Patterns (Conceptual Unit: Topics 4, 5, & 6) Approximately 5 weeks for the conceptual unit		Grade Level: 3
Additional Notes		
*Please consider this as a part of a three-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).		
Content Standards	2011 MA Curriculum Framework for Literacy	
3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations 3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.	N/A	

Essential Questions	Knowledge/Concepts	Skills																				
<p>What patterns can be used to find certain multiplication facts?</p>	<p>Anticipated Misconceptions: We are not adding zeros; we are writing, annexing or tacking them on.</p> <p>Confusing identity property of multiplication with the identity property of addition</p>	<p>Students will be able to:</p> <p>Multiply with 0, 1, 2, 5, 9 and 10 as factors and apply strategies/patterns.</p> <p>Recognize multiples of these factors.</p> <p>Apply zero and identity properties of multiplication.</p> <p>Multiply by multiples of 10 up to 90.</p>																				
Common Resources		Common Assessments																				
<p>http://www.k-5mathteachingresources.com/3rd-grade-number-activities.html</p> <p>http://www.commoncoresheets.com/</p> <p>“9” strategies Skip counting around room</p> <p>Math Reads: <i>Math Potatoes</i> <i>Patterns in Peru</i></p> <table border="1" data-bbox="191 1156 1157 1396"> <thead> <tr> <th>Lesson</th> <th>Standard</th> <th>Notes</th> <th>Intervention</th> </tr> </thead> <tbody> <tr> <td>5-1</td> <td>OA.3,OA.9</td> <td></td> <td>B47</td> </tr> <tr> <td>5-2</td> <td>OA.9</td> <td>Use all the “9” strategies</td> <td>B48</td> </tr> <tr> <td>5-3</td> <td>OA.9</td> <td></td> <td>B49</td> </tr> <tr> <td>5-4</td> <td>OA.9</td> <td></td> <td>B47, 48</td> </tr> </tbody> </table>		Lesson	Standard	Notes	Intervention	5-1	OA.3,OA.9		B47	5-2	OA.9	Use all the “9” strategies	B48	5-3	OA.9		B49	5-4	OA.9		B47, 48	
Lesson	Standard	Notes	Intervention																			
5-1	OA.3,OA.9		B47																			
5-2	OA.9	Use all the “9” strategies	B48																			
5-3	OA.9		B49																			
5-4	OA.9		B47, 48																			

5-5	OA.9	See misconceptions	B54		
5-6	NBT.3	See misconceptions	B54		
5-7	NBT.3	2-question problems	E6		
Vocabulary					
Multiples, identity property of multiplication, zero property of multiplication					

Unit/Timeframe: Topic 6 — Multiplication Facts: Use Known Facts (Conceptual Unit: Topics 4, 5, & 6) Approximately 5 weeks for the conceptual unit		Grade Level: 3
Additional Notes		
<p>*Please consider this as a part of a three-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).</p> <ul style="list-style-type: none"> Area concepts are introduced using MD.7.C Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning. 6-2 to 6-5: Start introducing the concept of area with vocabulary. The area lessons are found in Topic 14. 		
Content Standards		2011 MA Curriculum Framework for Literacy
3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations 3.OA.5 Apply properties of operations as strategies to multiply and divide. 3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the		N/A

problem.				
Essential Questions		Knowledge/Concepts		Skills
How can unknown multiplication facts be found using known facts?		Anticipated Misconceptions: Breaking apart a factor using unknown facts Factors can be broken down into more than 3 numbers You can break apart all factors and vertically Going from the broken apart factors to the original factors		Students will be able to: Break apart an array. Multiply with 3, 4, 6, 7 and 8 as factors. Use 5 as an anchor number when finding products involving 6, 7, and 8. Multiply 3 factors. Use known facts and patterns to find products.
Common Resources			Common Assessments	
http://www.k-5mathteachingresources.com/3rd-grade-number-activities.html http://www.commoncoresheets.com/ Math Reads: <i>1001 Bugs to Spot</i> <i>The 512 Ants on Sullivan Street</i> <i>Amanda Bean's Amazing Dream</i> <i>The Best of Times</i> <i>Cheetah Math</i> <i>Minnie's Diner</i>				
Lesson	Standard	Notes	Intervention	
6-1	OA. 3, OA.5	2 days		
6-2	OA.3, OA. 5, OA.9		B50	

6-3	OA.3, OA. 5, OA.9		B51		
6-4	OA.3, OA. 5, OA.9		B52		
6-5	OA.3, OA. 5, OA.9		B53		
6-6	OA.3, OA. 5, OA.9		B56		
6-7	OA.9		B47-54		
6-8 (Omit)					
6-9	OA.3		E7		
Vocabulary					
Partial product, associative property, distributive property					

Unit/Timeframe: Topic 12 – Time Approximately 1 week		Grade Level:3
Additional Notes		
<ul style="list-style-type: none"> • Linear measurement review needed using supplementary material. (2.MD.1) • Revisit time throughout the rest of the year. • Reintroduce fraction language from second grade here. (fourths to quarters) 		
Content Standards	2011 MA Curriculum Framework for Literacy	
3.MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes	N/A	

Essential Questions	Knowledge/Concepts	Skills																				
<p>How can lengths of time be measured and found?</p>	<p>Anticipated Misconceptions:</p> <p>Noon is a.m. because it is light out</p> <p>Difference between analog and digital clock</p> <p>am. and p.m. concepts – particularly past midnight</p>	<p>Students will be able to:</p> <p>Tell time to the nearest quarter, half an hour, and minute.</p> <p>Find elapsed time forward and backward.</p> <p>Find and identify start/end time of an event.</p>																				
Common Resources		Common Assessments																				
<p>http://www.k-5mathteachingresources.com/3rd-grade-measurement-and-data.html</p> <p>Number Lines Graphic Organizer Clocks</p> <p>Math Reads: <i>Telling Time</i> <i>Lucky Beans</i> <i>Millions to Measure</i> <i>How Tall, How Short, How Far Away?</i></p> <table border="1" data-bbox="191 1138 1157 1416"> <thead> <tr> <th>Lesson</th> <th>Standard</th> <th>Notes</th> <th>Intervention</th> </tr> </thead> <tbody> <tr> <td>12-1</td> <td>MD.1</td> <td></td> <td>D13</td> </tr> <tr> <td>12-2</td> <td>MD.1</td> <td></td> <td>D14</td> </tr> <tr> <td>12-3</td> <td>MD.1</td> <td>Replace with <i>Common Core</i> Progress Lesson 24 (See Math Coach)</td> <td>D15</td> </tr> <tr> <td>12-4</td> <td>MD.1</td> <td></td> <td>D16</td> </tr> </tbody> </table>		Lesson	Standard	Notes	Intervention	12-1	MD.1		D13	12-2	MD.1		D14	12-3	MD.1	Replace with <i>Common Core</i> Progress Lesson 24 (See Math Coach)	D15	12-4	MD.1		D16	
Lesson	Standard	Notes	Intervention																			
12-1	MD.1		D13																			
12-2	MD.1		D14																			
12-3	MD.1	Replace with <i>Common Core</i> Progress Lesson 24 (See Math Coach)	D15																			
12-4	MD.1		D16																			

12-5	MD.1		E30		
Vocabulary					
Half hour, quarter hour, elapsed time, a.m., p.m.					

Unit/Timeframe: Topic 7 – Meaning of Division (Conceptual Unit: Topics 7 & 8) Approximately 4 weeks for the conceptual unit		Grade Level: 3
Additional Notes		
*Please consider this as a part of a two-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).		
Content Standards	2011 MA Curriculum Framework for Literacy	
<p>3.OA.2 Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each</p> <p>3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p> <p>3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers.</p> <p>3.OA.6 Understand division as an unknown-factor problem.</p>	N/A	

Essential Questions	Knowledge/Concepts	Skills																				
<p>What are the different meanings of division?</p> <p>How is division related to other operations?</p>	<p>Concept of multiplication</p> <p>Concept of division</p> <p>Types of division situations (sharing, repeated subtraction)</p> <p>Relationship between multiplication and division (fact families)</p>	<p>Students will be able to:</p> <p>Write division stories.</p> <p>Use multiplication table to find division facts.</p> <p>Write an equation using a variable to represent an unknown.</p>																				
Common Resources		Common Assessments																				
<p>http://www.k-5mathteachingresources.com/ <i>The Doorbell Rang</i> by Pat Hutchins</p> <p>Ms. Westmoreland’s video on close reading in math https://www.youtube.com/watch?v=yS4wz4zPX_U</p> <p>Math Reads: <i>11 Kings and 42 Elephants</i> <i>Cheetah Math</i></p> <table border="1" data-bbox="191 1036 1157 1425"> <thead> <tr> <th>Lesson</th> <th>Standard</th> <th>Notes</th> <th>Intervention</th> </tr> </thead> <tbody> <tr> <td>7-1</td> <td>3.OA.2</td> <td>Tell students that a division sentence is a number sentence.</td> <td>B57</td> </tr> <tr> <td>7-2</td> <td>3.OA.2</td> <td></td> <td>B57</td> </tr> <tr> <td>7-3</td> <td>3.OA.6</td> <td>This is possibly the first time students see a letter variable (n)</td> <td>A76</td> </tr> <tr> <td>7-4</td> <td>3.OA.4</td> <td>You may wish to</td> <td>E26 and 27</td> </tr> </tbody> </table>		Lesson	Standard	Notes	Intervention	7-1	3.OA.2	Tell students that a division sentence is a number sentence.	B57	7-2	3.OA.2		B57	7-3	3.OA.6	This is possibly the first time students see a letter variable (n)	A76	7-4	3.OA.4	You may wish to	E26 and 27	
Lesson	Standard	Notes	Intervention																			
7-1	3.OA.2	Tell students that a division sentence is a number sentence.	B57																			
7-2	3.OA.2		B57																			
7-3	3.OA.6	This is possibly the first time students see a letter variable (n)	A76																			
7-4	3.OA.4	You may wish to	E26 and 27																			

		supplement other problems for the ones in this lesson.			
7-5	3.OA.3		B58		
7-6 (Optional)	3.OA.3	You may choose to use this in Topic 14 with Area.	E22		
Vocabulary					
Division, variable					

Unit/Timeframe: Topic 8 – Division Facts (Conceptual Unit: Topics 7 & 8) Approximately 4 weeks for the conceptual unit		Grade Level: 3
Additional Notes		
*Please consider this as a part of a two-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).		
Content Standards		2011 MA Curriculum Framework for Literacy
<p>3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p> <p>3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers.</p> <p>3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one</p>		N/A

knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.																																		
Essential Questions	Knowledge/Concepts	Skills																																
How can an unknown division fact be found by thinking of a related multiplication fact?	<p>Multiplication facts</p> <p>Basic multiplication and division properties</p> <p>The definitions of multiplication and division</p>	<p>Students will be able to:</p> <p>Use related multiplication facts to solve division problems.</p>																																
Common Resources		Common Assessments																																
<p>http://www.k-5mathteachingresources.com</p> <p>Balance Sheet used in addition lesson 2-8 (Lesson 8-6)</p> <p>Math Reads: <i>11 Kings and 42 Elephants</i> <i>Cheetah Math</i></p> <table border="1"> <thead> <tr> <th>Lesson</th> <th>Standard</th> <th>Notes</th> <th>Intervention</th> </tr> </thead> <tbody> <tr> <td>8-1</td> <td>3.OA.7</td> <td>You might consider using supplemental materials to show visuals for vocabulary.</td> <td>B59</td> </tr> <tr> <td>8-2</td> <td>3.OA.7</td> <td>This is the first lesson that shows the division bar.</td> <td>B60</td> </tr> <tr> <td>8-3</td> <td>3.OA.7</td> <td></td> <td>B61</td> </tr> <tr> <td>8-4</td> <td>3.OA.7</td> <td></td> <td>B62</td> </tr> <tr> <td>8-5</td> <td>3.OA.3</td> <td></td> <td>E7</td> </tr> <tr> <td>8-6</td> <td>3.OA.3</td> <td>Use Balance Sheet</td> <td>B59</td> </tr> <tr> <td>8-7</td> <td>3.OA.3</td> <td></td> <td>B63</td> </tr> </tbody> </table>		Lesson	Standard	Notes	Intervention	8-1	3.OA.7	You might consider using supplemental materials to show visuals for vocabulary.	B59	8-2	3.OA.7	This is the first lesson that shows the division bar.	B60	8-3	3.OA.7		B61	8-4	3.OA.7		B62	8-5	3.OA.3		E7	8-6	3.OA.3	Use Balance Sheet	B59	8-7	3.OA.3		B63	
Lesson	Standard	Notes	Intervention																															
8-1	3.OA.7	You might consider using supplemental materials to show visuals for vocabulary.	B59																															
8-2	3.OA.7	This is the first lesson that shows the division bar.	B60																															
8-3	3.OA.7		B61																															
8-4	3.OA.7		B62																															
8-5	3.OA.3		E7																															
8-6	3.OA.3	Use Balance Sheet	B59																															
8-7	3.OA.3		B63																															

8-8	3.OA.7		B43-54, B56-63		
8-9	3.OA.3		E27		
Vocabulary					
Dividend, divisor, quotient					

Unit/Timeframe: Topic 9 – Understanding Fractions (Conceptual Unit: Topics 9 & 10) Approximately 4 weeks for the conceptual unit		Grade Level: 3
Additional Notes		
<p>*Please consider this as a part of a two-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).</p> <ul style="list-style-type: none"> • Topic 9 has good enrichment pages • The denominators for third grade are limited to 2, 3, 4, 6, and 8 • We recommend using rectangles when representing fractions; Circles are difficult to draw, partition equally and compare 		
Content Standards	2011 MA Curriculum Framework for Literacy	
<p>3.NF.1 Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.</p> <p>3.NF.2a Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number</p>	N/A	

<p>$1/b$ on the number line.</p> <p>3.NF.2b Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.</p> <p>3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p>			
Essential Questions	Knowledge/Concepts	Skills	
<p>What are different interpretations of a fraction?</p>	<p>Anticipated Misconceptions:</p> <p>Counting lines instead of spaces on number line</p> <p>Understand fractions as equal parts of a whole</p> <p>Meaning of numerator and denominator</p>	<p>Students will be able to:</p> <p>Represent and locate fractions on a number line.</p> <p>Name a fraction.</p> <p>Divide a region into a fraction.</p>	
Common Resources		Common Assessments	
<p>http://www.k-5mathteachingresources.com</p> <p>Math Reads: <i>Fractions = Trouble!</i> <i>Go, Fractions!</i> <i>Grandfather Tang's Story</i></p>			
Lesson	Standard	Notes	Intervention
9-1	3.NF.1	Be careful using Other Examples without exploring whether they	A42

		are equal to each other.			
9-2	3.NF.1		A43		
9-3 (Omit)	3.NF.1	Revisit after MCAS if time allows.	A44		
9-4 (Omit)		Revisit after MCAS if time allows.	A44		
9-5 (2 days) Teach 9-7 before this lesson.	3.NF.2a	You can replace this with <i>Common Core Progress Lesson 18</i> (158-165)	A46		
9-6 (Omit)	3.NF.2a		A40		
9-7 Do this lesson before 9-5.	3.NF.2b		A45		
9-8	3.OA.3		E21		
Vocabulary					
Halves, thirds, fourths, sixths, eighths, fraction, unit fraction, numerator, denominator, mixed number					

Unit/Timeframe: Topic 10 – Fraction Comparison and Equivalence (Conceptual Unit: Topics 9 & 10) Approximately 4 weeks for the conceptual unit		Grade Level: 3
Additional Notes		
*Please consider this as a part of a two-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).		
Content Standards		2011 MA Curriculum Framework for Literacy
<p>3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram.</p> <p>3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.</p> <p>3.NF.3a Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.</p> <p>3.NF.3c Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.</p> <p>3.NF.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.</p>		N/A
Essential Questions	Knowledge/Concepts	Skills
What are different ways to compare fractions?	<p>Anticipated Misconceptions:</p> <p>Fractions can only be seen as horizontal</p> <p>Students may have difficulty expressing a whole number as a fraction. (ex. $3 = 3/1$ or $3 = 6/2$) Students will benefit from relating fractions and division.</p>	<p>Students will be able to:</p> <p>Compare fractions with the same numerator or the same denominator.</p> <p>Use a number line and models to compare.</p> <p>Use a number line and models to find equivalent fractions.</p>

Write whole numbers as fractions.

Common Resources

Common Assessments

<http://www.k-5mathteachingresources.com/>

Math Reads:

Fractions = Trouble!

Go, Fractions!

Grandfather Tang's Story

Lesson	Standard	Notes	Intervention
10-1	3.NF3d	See the unpacked standard. Models show both horizontal and vertical fractions.	A47
10-2	3.NF3d		
10-3	3.NF3d	Only like numerators or like denominators should be compared. Will need to supplement problems. Using benchmarks do not need to be mastered until 4 th grade.	A40
10-4	3.NF3d	Only like numerators or like denominators should be compared.	A50

10-5	3.NF.3a	Don't teach simplest form. They only need to find equivalent fractions.	A48* good		
10-6	3.NF.3a	The Problem-Based Interactive Learning (PBIL) has a good visual representation for launching.			
10-7 (2 days)	3.NF.3c	May use green intervention activity pg. 261B to help.			
10-8	3.NF.3	Ordering fractions is not included in the standard, only comparing 2 fractions.	A51		
10-9	3.NF.2	Use problems that pertain to your student needs. Pick and choose.			
Vocabulary					
Equivalent fraction, relative (to the whole)					

Unit/Timeframe: Topic 11 – Two-dimensional Shapes and Their Attributes (Conceptual Unit: Topics 11, 13 & 14) Approximately 4 weeks for the conceptual unit		Grade Level: 3
Additional Notes		
*Please consider this as a part of a three-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).		
Content Standards		2011 MA Curriculum Framework for Literacy
3.G.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. 3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.		N/A
Essential Questions	Knowledge/Concepts	Skills
How can two-dimensional shapes be described, analyzed and classified?	What a quadrilateral is Types of lines and angles What a polygon is	Students will be able to: Classify two-dimensional shapes. Identify attributes of two-dimensional shapes. Draw quadrilaterals. Partition shapes into parts with equal areas.

Common Resources				Common Assessments																																								
<p>http://www.k-5mathteachingresources.com/</p> <p>Math Reads: <i>Grandfather Tang's Story</i> <i>The Greedy Triangle</i> <i>I Spy Shapes in Art</i> <i>Shape Up!</i></p> <p>Unpacked Standards http://www.dpi.state.nc.us/docs/acre/standards/common-core-tools/unpacking/math/3rd.pdf</p> <table border="1"> <thead> <tr> <th>Lesson</th> <th>Standard</th> <th>Notes</th> <th>Intervention</th> </tr> </thead> <tbody> <tr> <td>11-1</td> <td>3.G.1</td> <td></td> <td>D61</td> </tr> <tr> <td>11-2</td> <td>3.G.1</td> <td></td> <td>D62</td> </tr> <tr> <td>11-3</td> <td>3.G.1</td> <td>Do not focus on concave, convex and diagonal.</td> <td>D63 and D65</td> </tr> <tr> <td>11-4 (Omit)</td> <td>3.G.1</td> <td></td> <td>D64</td> </tr> <tr> <td>11-5 (2 days)</td> <td>3.G.1</td> <td>See unpacked standard.</td> <td>D63 and D65</td> </tr> <tr> <td>11-6</td> <td>3.G.1</td> <td>You may consider supplementing 11-6 with <i>Common Core Progress Lesson 36</i>.</td> <td>D52</td> </tr> <tr> <td>11-7</td> <td>3.G.1</td> <td></td> <td>D53</td> </tr> <tr> <td>11-8 (Optional)</td> <td>3.G.2</td> <td></td> <td></td> </tr> <tr> <td>11-9</td> <td>3.G.1</td> <td></td> <td>E31</td> </tr> </tbody> </table>				Lesson	Standard	Notes	Intervention	11-1	3.G.1		D61	11-2	3.G.1		D62	11-3	3.G.1	Do not focus on concave, convex and diagonal.	D63 and D65	11-4 (Omit)	3.G.1		D64	11-5 (2 days)	3.G.1	See unpacked standard.	D63 and D65	11-6	3.G.1	You may consider supplementing 11-6 with <i>Common Core Progress Lesson 36</i> .	D52	11-7	3.G.1		D53	11-8 (Optional)	3.G.2			11-9	3.G.1		E31	
Lesson	Standard	Notes	Intervention																																									
11-1	3.G.1		D61																																									
11-2	3.G.1		D62																																									
11-3	3.G.1	Do not focus on concave, convex and diagonal.	D63 and D65																																									
11-4 (Omit)	3.G.1		D64																																									
11-5 (2 days)	3.G.1	See unpacked standard.	D63 and D65																																									
11-6	3.G.1	You may consider supplementing 11-6 with <i>Common Core Progress Lesson 36</i> .	D52																																									
11-7	3.G.1		D53																																									
11-8 (Optional)	3.G.2																																											
11-9	3.G.1		E31																																									
Vocabulary																																												
<p>Quadrilaterals, rhombus, rectangle, square, parallelogram, trapezoid, angle, right angle, perpendicular, parallel, vertex, intersecting lines, point, line, line segment, acute, obtuse, sides,</p> <p>Please do not refer to the rhombus as a <i>diamond</i>.</p>																																												

Unit/Timeframe: Topic 13 – Perimeter (Conceptual Unit: Topics 11, 13 & 14)		Grade Level: 3
Approximately 4 weeks for the conceptual unit		
Additional Notes		
<p>*Please consider this as a part of a three-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).</p> <ul style="list-style-type: none"> Consider doing a measurement lesson using a ruler before beginning this topic. 		
Content Standards		2011 MA Curriculum Framework for Literacy
3.MD.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.		N/A
Essential Questions	Knowledge/Concepts	Skills
How can perimeter be measured and found?	<p>Definition of perimeter-distance around a figure</p> <p>Attributes of quadrilaterals</p> <p>Different shapes can have the same perimeter</p> <p>Perimeter is one-dimensional; just length</p>	<p>Students will be able to:</p> <p>Find the perimeter of polygons.</p> <p>When given perimeter, find the unknown side.</p> <p>Find the perimeter of a shape drawn on a grid.</p> <p>Draw a shape with a given perimeter.</p>

	Anticipated Misconceptions: Figures are not always drawn to scale			
Common Resources				Common Assessments
http://www.k-5mathteachingresources.com				
Math Reads:				
<i>Three Pigs, One Wolf, and Seven Three Pigs, One Wolf, and Seven Magic Shapes</i>				
Lesson	Standard	Notes	Intervention	
13-1	3.MD.8		D44	
13-2 (Optional)	3.MD.8			
13-3	3.MD.8	Ignore examples using triangles.	D44	
13-4	3.MD.8			
13-5	3.MD.8	You may replace this with <i>Common Core Progress Lesson 33</i> .	E24	
Vocabulary				
Perimeter, side, length, width				

<p>Unit/Timeframe: Topic 14 – Area (Conceptual Unit: Topics 11, 13 & 14)</p> <p>Approximately 4 weeks for the conceptual unit</p>	<p>Grade Level: 3</p>
<p>Additional Notes</p>	
<p>*Please consider this as a part of a three-Topic unit. You may wish to be flexible with the sequence of the lessons and/or Topics throughout the unit (e.g. teaching lessons from within this unit – but from different Topics - together or in a different order).</p>	
<p>Content Standards</p>	<p>2011 MA Curriculum Framework for Literacy</p>
<p>3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.</p> <p>3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.</p> <p>5.MD.5a A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.</p> <p>5.MD.5b A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.</p> <p>3.MD.6 Measure areas by counting unit squares (square cm, square m, square in, square ft., and improvised units).</p> <p>3.MD.7a Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.</p> <p>3.MD.7b Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.</p> <p>3.MD.7c Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.</p> <p>3.MD.7d Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the</p>	<p>N/A</p>

non-overlapping parts, applying this technique to solve real world problems.														
Essential Questions		Knowledge/Concepts												
<p>What does area mean?</p> <p>What are different ways to find the area of a shape?</p>	<p>Distributive property; area is additive</p> <p>Rectangles with the same area can have different perimeters and vice versa</p> <p>Area is two-dimensional; length and width hence it is measured in square units</p> <p>Area can be found by multiplying side lengths of rectangles</p> <p>There can be no gaps or overlaps</p>	<p>Students will be able to:</p> <p>Find area by counting the number of square units on a grid.</p> <p>Make a figure when given the area.</p> <p>Measure the area of a shape.</p> <p>Use the area of rectangles to model distributive property.</p>												
Common Resources		Common Assessments												
<p>http://www.k-5mathteachingresources.com/</p> <p>Geoboards</p> <p>Graph Paper (Teaching Tools 11 and 12)</p> <p>Math Reads: <i>Three Pigs, One Wolf, and Seven Three Pigs, One Wolf, and Seven Magic Shapes</i></p> <table border="1"> <thead> <tr> <th>Lesson</th> <th>Standard</th> <th>Notes</th> <th>Intervention</th> </tr> </thead> <tbody> <tr> <td>14-1</td> <td>3.MD.5</td> <td></td> <td>D36 and D45</td> </tr> <tr> <td>14-2</td> <td>3.MD.5a</td> <td>Consider using square tiles before drawing.</td> <td>D36 and D45</td> </tr> </tbody> </table>		Lesson	Standard	Notes	Intervention	14-1	3.MD.5		D36 and D45	14-2	3.MD.5a	Consider using square tiles before drawing.	D36 and D45	
Lesson	Standard	Notes	Intervention											
14-1	3.MD.5		D36 and D45											
14-2	3.MD.5a	Consider using square tiles before drawing.	D36 and D45											

14-3	3.MD.6		D36 and D45		
14-4	3.MD.7a		D36 and D45		
14-5	3.MD.7c	You can supplement with <i>Common Core Progress</i> lesson. Keep the same model as you used in 6-1.			
14-6	3.MD.6		E28		
14-7	3.MD.7d	Supplement homework Practice Master. You may use the <i>Common Core Progress</i> book.	D35,44,45		
14-8	3.MD.7b				
14-9 (Omit)	3.G.2	This was addressed in Topic 11.			
14-10 (Optional)	3.MD.5				
Vocabulary					
Area, square unit					

Unit/Timeframe: Topic 15 – Liquid Volume and Mass Approximately 1 week			Grade Level: 3
Additional Notes			
<ul style="list-style-type: none"> You may choose to teach all lessons on customary measurement together (15-1 and 15-4) and then teach metric (15-2 and 15-3). 			
Content Standards			2011 MA Curriculum Framework for Literacy
3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). ¹ Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.			N/A
Essential Questions	Knowledge/Concepts		Skills
What are the customary units for measuring capacity and weight? What are the metric units for measuring capacity and weight?	There are two systems of measurement – customary and metric		Students will be able to: Choose appropriate unit to measure and estimate liquid volume and masses. Solve one-step word problems involving masses or volumes.
Common Resources			Common Assessments
http://www.k-5mathteachingresources.com/			
Lesson	Standard	Notes	Intervention
15-1	3.MD.2		D40
15-2	3.MD.2		D41
15-3	3.MD.2		D43
15-4	3.MD.2	Replace with <i>Common Core Progress Lesson 25</i>	D42
15-5 (Optional)	3.MD.2		D29-34

Vocabulary

Capacity, cup, pint, quart, gallon, milliliter, liter, mass, gram, kilogram, weight, ounce, pound, ton

Unit/Timeframe: Topic 16 – Data Approximately 1 ½ weeks		Grade Level:3
Content Standards		2011 MA Curriculum Framework for Literacy
<p>3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.</p> <p>3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.</p>		N/A
Essential Questions	Knowledge/Concepts	Skills
How can data be represented, interpreted, and analyzed?	<p>A line plot can start with any number</p> <p>An “X” on a line plot represents one</p> <p>All numbers in the range of the line plot need to be represented even if there is no data</p> <p>What a key is</p> <p>Key does not always represent one</p>	<p>Students will be able to:</p> <p>Draw a picture graph and bar graph.</p> <p>Solve one and two-step problems using information from bar graphs.</p> <p>Measure using rulers with halves and fourths.</p> <p>Make a line plot with whole numbers, halves or quarters.</p>

	<p>A bar graph can be horizontal or vertical</p> <p>The scale does not always have intervals of one</p> <p>The point at which the two axes meet on a bar graph is always zero</p> <p>Graphs make it easier to describe and compare data</p>	Label graphs appropriately.	
Common Resources		Common Assessments	
<p>http://www.k-5mathteachingresources.com/3rd-grade-measurement-and-data.html</p> <p>Teaching Tool 24 Teaching Tool 30 Teaching Tool 48 (blank line plot) Teaching Tool 49 Teaching Tool 50</p>			
Lesson	Standard	Notes	Intervention
16-1	3.MD.4	See the unpacked standard.	D85
16-2	3.MD.4	You may replace with <i>Common Core Progress Lesson 27</i> .	D85
16-3	3.MD.3	See the unpacked standard.	D83 and D84
16-4	3.MD.3		D83

16-5	3.MD.3		D84		
16-6	3.MD.3		E29		
Vocabulary					
Line plot, pictograph, key, bar graph, scale					