Grade 1 Curriculum Map

Unit/Timeframe: **Developing an Understanding of Addition and Subtraction (Topics 1-4)***	**Grade Level: 1**
Approximately 8 weeks for conceptual unit **Topic 1** :Understanding Addition	

Additional Notes
***Please consider this as a part of a four-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**
K.CC.3: Recognize numbers to 10 **OA.1:**Use addition and subtraction to solve word problems within 20 **OA.3:** Apply properties of operations as strategies to add and subtract	N/A

Essential Questions	**Knowledge/Concepts**	**Skills**
What are ways to think about addition? How can objects be used to model addition?	Two numbers can be added in any order. **Misconceptions**: Use a variety of terms to mean equal such as “same as”, “is” and the conceptual idea of balance. Students may be able to count forward but not backwards. Students may be able to identify a number but not write the number.	**Students will be able to :** Recognize different addition situations such as putting together and adding to an unknown in any position. *See Table (*Common Addition and Subtraction Situations*) on **page 183** of Massachusetts Curriculum Framework. Recognize the relationship of parts to a whole. Compose numbers within 10.

		Use objects to model addition.
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 1A and 1B **Additional Resources:** Explicit instruction on math symbols (=, +, – Ex. Gus the Plus, Ellie Equal Use a balance scale for equal sign instruction Additional lessons may be needed to understand the meaning of the equal sign PowerPoint and cards for **subitizing** Counters in a cup…how many are yellow? Red? Dominoes Unifix cubes or dominoes to model horizontal and vertical Rekenrek up to 10 *Moose Ears*---fingers up to 10 120 Chart Math Literature/Trade books Forward counting games---Ex. -Circle Game, Magic Number (for lining up) Backward counting games Sequencing numbers---have students put cards in order; Ex. – Treasure Hunt and Number Tracks Identify and write numbers to 20 – various worksheets and activities **Math Reads:** *Five Little Monkeys Go Shopping* *Over in the Ocean*		**enVisionMath Program:** ***Optional*** *-* *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations

Hannah's Collection *Christopher Counting* WEB SITE: **AVMR Resources for Number Sense and Computation –** http://learn.district196.org/course/view.php?id=1482 Examples of **true** and **false** statements (See below): From Grade 1 Flip Book CCS-- http://www.tusd1.org/resources/curriculum/math/1stflippdf2.pdf Are these true? 8 = 8 1 + 1 =7 4 + 3 = 3 + 4 9 + 3 = 10 3 + 4 + 5 = 7 + 5	
Vocabulary	
In all, part/whole, addition sentence, addends, plus, equal sign(=), equal to, same as, add, sum, join, order	

Unit/Timeframe: **Developing an Understanding of Addition and Subtraction (Topics 1-4)***	**Grade Level: 1**
Approximately 8 weeks for conceptual unit **Topic 2**: Understanding Subtraction	

Additional Notes

***Please consider this as a part of a four-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).**

*It would be advantageous to introduce the concept of FACT FAMILIES at a basic level here.

Content Standards	**2011 MA Curriculum Framework for Literacy**
1.OA.1: Use addition and subtraction to solve word problems within 20 **1.OA.4:** Understand subtraction as an unknown addend problem **1.OA.6:** Add and subtract within 20, demonstrate fluency within 10 **1.OA.7:** Understand the meaning of the equal sign	N/A

Essential Questions	**Knowledge/Concepts**	**Skills**
What are ways to think about subtraction?	Understand the various situations that are represented by subtraction. Understand the relationship between addition and subtraction. **Misconceptions**: Subtraction is not just taking away.	**Students will be able to :** Recognize different subtraction situations such as difference, missing part, taking away and comparing and how many more. *See Table (*Common Addition and Subtraction Situations*) on **page 183** of Massachusetts Curriculum Framework.

	Comparison and difference problems are difficult concepts for students …"How many more than" may be understood as "more" meaning adding and not subtracting.	Decompose numbers within 10. Use objects to model subtraction. Use addition facts to solve subtraction. Write and solve subtraction number sentences for story problems.
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 39A and 39B **Additional Resources:** PowerPoint and cards for **subitizing** Counters in a cup…How many are yellow? Red? Dominoes, dice games, (Ex. - Roll and Record, Bump) Unifix cubes or dominoes to model horizontal and vertical operations Rekenrek up to 10 Moose Ears---fingers up to 10 120 Chart Forward counting games Ex. -Circle Game, Magic Number (for lining up) Backward counting games Ex. – Treasure Hunt Sequencing numbers---Have students put cards in order Ex. – Treasure Hunt and Number Tracks Math Literature/Trade books Identify and write numbers to 20 – various worksheets and activities		**enVisionMath Program:** ***Optional*** *-* *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations

Math Reads: *Quack and Count* *Bean Thirteen* WEB SITE: **AVMR Resources for Number Sense and Computation –** http://learn.district196.org/course/view.php?id=1482 Examples of **true** and **false** statements (See below): See Grade 1 Flip Book CCS--- http://www.tusd1.org/resources/curriculum/math/1stflippdf2.pdf Are these true? 7 = 8 – 1 8 = 8 1 + 1 + 3 =7 4 + 3 = 3 + 4 6 – 1 = 1 – 6 9 + 3 = 10 5 + 3 = 10 – 2 4 + 5 = 5 + 4 3 + 4 + 5 = 7 + 5	
Vocabulary	
Minus, difference, less than, more than, fewer, missing part, compare, subtract, take away, same amount, equal sign, equal to	

<table>
<tr><td colspan="2">Unit/Timeframe: Developing an understanding of Addition and Subtraction (Topics 1-4)*

Approximately 8 weeks for conceptual unit

Topic 3: Five and Ten Relationship</td><td>Grade Level: 1</td></tr>
<tr><td colspan="3">Additional Notes</td></tr>
<tr><td colspan="3">*Please consider this as a part of a four-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).</td></tr>
<tr><td colspan="2">Content Standards</td><td>2011 MA Curriculum Framework for Literacy</td></tr>
<tr><td colspan="2">1. OA.4: Understand subtraction as an unknown-addend problem. For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.
1. OA.5: Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
1. OA.6: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.</td><td>N/A</td></tr>
<tr><td>Essential Questions</td><td>Knowledge/Concepts</td><td>Skills</td></tr>
<tr><td>How would you recognize parts of 10?</td><td>Understand how to show ten on the ten-frame.

Understand the relationship between five and ten.

Understand that a missing part of a whole can be found when the whole and the other part are known (part-part-whole).</td><td>Students will be able to:

Recognize numbers on a ten frame noting the relationship of those numbers to five and ten.

Recognize that the number 10 can be broken into parts in several ways.</td></tr>
</table>

	Misconceptions: A ten-frame should be used in a *specific* manner to get ideas across. Students need to be monitored for this, or else strategies may not become fully developed.	
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 89A and 89B **Additional Resources:** Games- Ten Frame Fill Up Number 3 Ways 10 Take Away Tens Go Fish Turn Over Five, Ten Rekenrek up to 10 Moose Ears---Fingers up to 10 (With 2-3 participants, you can go up through 20) Ten-frames 120 Chart Forward counting games Ex. -Circle Game, Magic Number (for lining up) Backward counting games Ex. – Treasure Hunt Sequencing numbers---have students put cards in order Ex. – Treasure Hunt and Number Tracks Math Literature/Trade books		**enVisionMath Program:** ***Optional*** *-* *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations

WEB SITE: **AVMR Resources for Number Sense and Computation –** http://learn.district196.org/course/view.php?id=1482	
Vocabulary	
Ten-frame	

Unit/Timeframe: **Developing an understanding of Addition and Subtraction (Topics 1-4)***	**Grade Level: 1**
Approximately 8 weeks for conceptual unit **Topic 4**: Addition and Subtraction Facts to 12	
Additional Notes	
***Please consider this as a part of a four-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**
1.OA.1: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions. **1.OA.3:** Apply properties of operations as strategies to add and subtract **1.OA.4:** Understand subtraction as an unknown-addend problem. *For example,*	N/A

subtract 10 – 8 by finding the number that makes 10 when added to 8. **1.OA.5:** Relate counting to addition and subtraction **1.OA.6:** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.		
Essential Questions	**Knowledge/Concepts**	**Skills**
What are some different strategies you can use to become fluent in addition and subtraction through 12?	Understand and use "counting on" and "counting back" from any number through 12. Understand how doubles and near doubles are related, and how they can be used as an anchor for addition.	**Students will be able to:** Recognize doubles as a strategy for remembering sums. Recognize facts that anchor to 5 and 10. Recognize fact families.
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 115A and 115B **Additional Resources:** **Games -** Double Facts Flash Cards Ten-Frame Fill Up Making Ten Tens Go Fish Turn Over Five, Ten *Nearby Numbers*- (about missing numbers) Rekenreks- shows doubles and near doubles		**enVisionMath Program:** ***Optional*** - *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations

Ten-frames 120 Chart Forward counting games Ex. -Circle Game, Magic Number (for lining up) Backward counting games Ex. – Treasure Hunt Sequencing numbers---have students put cards in order Ex. – Treasure Hunt and Number Tracks Math Literature/Trade books **Math Reads:** *Teddy Bear Counting* *Two of Everything* WEB SITE: **AVMR Resources for Number Sense and Computation –** http://learn.district196.org/course/view.php?id=1482	
Vocabulary	
Counting on, counting back, doubles, near doubles	

<table>
<tr><td colspan="2">Unit/Timeframe: Topic 12: Length

Approximately 1 ½ weeks</td><td>Grade Level: 1</td></tr>
<tr><td colspan="3">Additional Notes</td></tr>
<tr><td colspan="3">• You may wish to introduce standard measurement as an extension.</td></tr>
<tr><td colspan="2">Content Standards</td><td>2011 MA Curriculum Framework for Literacy</td></tr>
<tr><td colspan="2">1.MD.1: Order three objects by length; compare the lengths of two objects indirectly by using a third object.
1.MD.2: Non-standard measurement concepts, including whole number measurement and estimation of length.</td><td>N/A</td></tr>
<tr><td>Essential Questions</td><td>Knowledge/Concepts</td><td>Skills</td></tr>
<tr><td>How can we use objects to measure and compare length?</td><td>Understand that the length of a non-standard unit (object) influences the overall measurement.

Understand that length is a measurement of an item from end-to-end.

Understand that using common units for measurement allow us to compare and order lengths.

Misconceptions:
Length is a linear measurement, and is therefore not used to describe curved</td><td>Students will be able to:

Use non-standard units to estimate and measure length.

Compare and order objects by length.</td></tr>
</table>

	surfaces.	
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 383A and 383B **Additional Resources:** Unifix cubes, straws, paper clips, and other standard objects Rulers for enrichment and extensions Everyday classroom objects Math Literature/Trade books **Math Reads:** *Big and Small* *Room for All* *The Biggest Fish*		**enVisionMath Program:** ***Optional*** - *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations
Vocabulary		
Length, measure, estimate, compare, order, longer, longest, shorter, shortest, taller		

Unit/Timeframe:	**Topic 7:** Counting and Number Patterns to 120	**Grade Level: 1**
Approximately 3 ½ weeks		

Additional Notes

- This Topic is meant to focus on counting and the representation of numbers. These skills will take multiple days and weeks to develop – beyond the time allotted for this Topic. Teachers should consider supplementing during this unit of instruction, in addition to extending practice throughout the school year.
- A solid foundation in these skills is essential for later units – particularly Topic 9.
- **Lessons 7.5 & 7.6** do not align to standards from the Massachusetts Curriculum Framework for Mathematics. However, skip-counting is a strategy that helps students to recognize patterns in numbers. It can be explored, but mastery of a specific pattern for skip-counting is not necessary for Grade 1 (Kindergarten addresses skip-counting by 10's).

Content Standards	**2011 MA Curriculum Framework for Literacy**
1.NBT.1: Count to 120; Read, write, and represent the quantities and numerals through 120. **1.NBT.2b:** The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. **1.NBT.2c:** The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	N/A

Essential Questions	**Knowledge/Concepts**	**Skills**
What do I notice about the counting patterns in two-digit numbers?	Understand that there is a specific sequence to the counting numbers. Understand that numbers repeat in predictable ways. Understand that numbers tell *how many*.	**Students will be able to:** Count to 120 by ones and tens – beginning at ANY number. Read, write, and represent the quantities and numerals through 120.

	Misconceptions: Not all numbers are read from left to right (e.g. teens).	Recognize and analyze patterns on the 120 chart.
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 237A and 237B **Additional Resources:** Multiple representations of the numbers to 120 (Ex. Number line, 120 chart) Math Literature/Trade books Forward counting games Ex. -Circle Game, Magic Number (for lining up) Backward counting games Ex. – Treasure Hunt Sequencing numbers (have students put cards in order) Ex. – Treasure Hunt and Number Tracks **Math Reads:** *Five Little Monkeys Play Hide and Seek* *Hannah's Collection* *Five Creatures* *Ready, Set, 100th Day* *Apple Countdown* *Count by Tens*		**enVisionMath Program:** ***Optional*** *-* *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations
Vocabulary		
Digits, rows, columns, skip-count, pattern, tens, hundreds chart		

Unit/Timeframe:	**Topic 8:** Tens and Ones	**Grade Level: 1**
Approximately 2 weeks		

Additional Notes

- **Omitted Lessons:**
  8-5 *Ways to Make Numbers*
  8-6 *Problem Solving: Make an Organized List* **–** This lesson relates to a problem-solving strategy that does not directly tie to the skills and concepts of this Topic. However it can be utilized as an extension activity.

Content Standards	**2011 MA Curriculum Framework for Literacy**
1.NBT.2: Understand that the two digits of a two-digit number represent amounts of tens and ones. **1.NBT.2a:** 10 can be thought of as a bundle of ten ones—called a "ten." **1.NBT.2c:** The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	N/A

Essential Questions	**Knowledge/Concepts**	**Skills**
Why do we use counting by ten to organize our thinking?	Understand that sets of ten can be perceived as single entities in a standard numeral. Understand that the tens are written to the left of the ones. Understand that numbers can be used to tell how many. **Misconceptions:** Knowing what to do with the "leftovers" that don't fit within one	**Students will be able to:** Read and write 2- digit numbers as groups of ten and some left over. Count groups of 10 up to ten tens and write how many. Take groups of tens and ones to show and write a given 2-digit number. Model a 2-digit number and write it in expanded form.

	ten-frame. Transferring information from concrete knowledge to abstract/symbolic reasoning – teachers need to explicitly connect place value manipulatives to the symbols used for them.	
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 267A and 267B **Additional Resources:** Math Literature/Trade books WEB SITE: **AVMR Resources for Number Sense and Computation –** http://learn.district196.org/course/view.php?id=1482 *Tens Ones Game* - Roll a die and ask for the number in ones, next roll ask for the number in ones and if total for both rolls is over ten then trade in ten ones for 1 ten *Roll, Build, Draw and Write* - Use two dice. Roll. Make a two-digit number. Build the number with your base ten blocks. Draw base ten blocks to show your number. Write the tens, ones, and the expanded form. *Tens and Ones* - Roll dice. Build the number. Write the number (tens, ones)		**enVisionMath Program:** ***Optional*** - *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations

Vocabulary
Tens, ones, break apart a ten, place value, digit, left over

Unit/Timeframe: Approximately 2 weeks	**Topic 9:** Comparing and Ordering Numbers to 100	**Grade Level: 1**

Additional Notes

- **Lesson 9.5** relates to a problem-solving strategy that does not directly tie to the skills and concepts of this Topic. However it can be utilized as an extension activity.
- **Prerequisite for this Topic - 1.NBT.1:** Count to 120; Read, write, and represent the quantities and numerals through 120.

Content Standards	**2011 MA Curriculum Framework for Literacy**
1.NBT.3: Compare two two-digit numbers with the symbols >, =, and <. **1.NBT.4:** Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and/or strategies. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. **1.NBT.5:** Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	N/A

Essential Questions	**Knowledge/Concepts**	**Skills**
How can I use place value to compare and order numbers?	Understand that in adding two-digit numbers, you add tens and tens, ones and ones. Understand that there are patterns in place value that assist us in adding and	**Students will be able to:** Use 120 chart to add 1 more, 1 less, 10 more, and 10 less; Write the result. Compare 2-digit numbers using >, <, and =

	subtracting.	Order 2-digit numbers.
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 297A and 297B **Additional Resources:** Counters Base-ten blocks Unifix cubes Multiple representations of the numbers to 120 (Ex. Number line, 120 chart) Math Literature/Trade books Forward counting games Ex. -Circle Game, Magic Number (for lining up) Backward counting games Ex. – Treasure Hunt Sequencing numbers (have students put cards in order) Ex. – Treasure Hunt and Number Tracks *Two-Digit Dance* **Math Reads:** *Hannah's Collection* WEB SITE: **AVMR Resources for Number Sense and Computation –** http://learn.district196.org/course/view.php?id=1482		**enVisionMath Program:** ***Optional*** *-* *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations
Vocabulary		
One more, one less, greater than, less than, more than, fewer than, equal to, same as, least, greatest, tens, ones, place value		

Unit/Timeframe: Shapes and Geometry (Topics 15 and 16)*	**Grade Level: 1**
Approximately 2 weeks for conceptual unit **Topic 15:** Geometry	

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).**

- **Lesson 15.2** relates to a problem-solving strategy that does not directly tie to the skills and concepts of this Topic. However it can be utilized as an extension activity.

- This Topic addresses the geometry standards from the Massachusetts Curriculum Framework for Mathematics, however the specific standard **1.G.1 specifically relates to <u>defining</u> and <u>non-defining</u> attributes** – which are not adequately addressed by the lessons from enVisionMath.

Content Standards	**2011 MA Curriculum Framework for Literacy**
1.G.1: Distinguish between <u>defining attributes</u> (e.g., triangles are closed and three-sided) versus <u>non-defining attributes</u> (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. **1.G.2:** Compose new, composite shapes from two-dimensional and three-dimensional shapes	N/A

Essential Questions	**Knowledge/Concepts**	**Skills**
Which attributes help me define a shape?	Understand that there can be shapes within shapes. Understand that some attributes	**Students will be able to:** Describe, classify and sort shapes by their attributes.

	define shapes (e.g. number of sides), whereas other attributes simply describe (e.g. color, size). Understand that two-dimensional shapes must be closed in order to correctly define them. **Misconceptions**: Orientation and side lengths for triangles and certain other polygons can vary – not all shapes are equilateral.	Build two-dimensional and three-dimensional composite shapes from smaller shapes.
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 469A and 469B **Additional Resources:** 3-D Shapes (solid figures and everyday objects) Pattern blocks Attribute blocks Math Literature/Trade books Ex. – *Round as a Moon Cake*, *Buildings*, *The Greedy Triangle*, *The Shape Shifter* Geoboards Tangrams		**enVisionMath Program:** ***Optional*** *-* *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations

Vocabulary
Attribute, pyramid, cube, rectangular prism, cone, cylinder, sort, sphere, trapezoid, hexagon, vertex/corner, side, two-dimensional/flat, three-dimensional/solid

Unit/Timeframe: Shapes and Geometry (Topics 15 and 16)*	**Grade Level: 1**
Approximately 2 weeks for conceptual unit **Topic 16:** Fractions of Shapes	

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).**

- The concept of a fraction as a part of a set is not addressed by this standard.

Content Standards	**2011 MA Curriculum Framework for Literacy**
1.G.3: Partition circles and rectangles into two and four equal shares. Describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares.	N/A

Essential Questions	**Knowledge/Concepts**	**Skills**
How can I divide a shape into equal-sized parts in different ways?	Understand that decomposing a circle or rectangle into more equal shares creates smaller shares.	**Students will be able to:** Break a circle or rectangle into equal parts.

		Determine whether a shape is divided into equal or unequal parts. Describe equal parts of whole objects, using the language halves, fourths, and quarters. Draw picture to solve a problem with parts of a whole.
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 515A and 515B **Additional Resources:** Math Literature/Trade books Fraction Tiles Die cuts Everyday items that can be split Ex – certain types of candy, fruit, snap cubes, etc. Play-Doh **Math Reads:** *Pattern Fish* *The Shape of Things* *Shapes that Roll* *A Squash and a Squeeze*		**enVisionMath Program:** ***Optional*** *-* *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations

Vocabulary
Halves, fourths, quarters, equal parts, half of, fourth of, quarter of

Unit/Timeframe: **Addition and Subtraction (Topic 5 and 6)***	**Grade Level: 1**
Approximately 4 weeks for conceptual unit **Topic 5:** Addition Facts to 20	

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).**

- **Optional Lesson: 5-7** *Making 10 to Add 8*

Content Standards	2011 MA Curriculum Framework for Literacy
1.OA.1: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions **1. OA.2:** Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. **1.OA.3:** Apply properties of operations as strategies to add and subtract **1. OA.6:** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.	N/A

<table>
<tr><th>Essential Questions</th><th>Knowledge/Concepts</th><th>Skills</th></tr>
<tr><td>What are some different strategies you can use to become fluent in addition through 20?</td><td>Understand “counting on” and “counting back” from any number through 20.

Understand how doubles (near doubles) are related and can be used as an anchor for addition.

Understand the properties of addition.</td><td>Students will be able to:

Recognize doubles as a strategy for remembering sums.

Recognize facts that anchor up to 20.

Add three numbers together.</td></tr>
<tr><th colspan="2">Common Resources</th><th>Common Assessments</th></tr>
<tr><td colspan="2">enVisionMath Program:

Interactive Digital Path
See Math Background 161A and 161B

Additional Resources:
Math Literature/Trade books

WEB SITE: AVMR Resources for Number Sense and Computation –
http://learn.district196.org/course/view.php?id=1482

Math Reads:
Handa’s Surprise
Apple Countdown

Games-
Five in a Row with 3 cards

Roll Three and Add- Use one die. Roll three times. Draw the dice rolled. Write an</td><td>enVisionMath Program:
Optional -
Quick Check
Practice Master
Problem Solving
Topic Test

Informal Assessments:
White boards
Anecdotal assessments
Journals/Notebooks
Frequent observations</td></tr>
</table>

addition sentence. Find the sum. *Double Compare*- Use a deck of number cards (no wild cards), deal cards face down, turn over top two cards, the player with the larger total takes the cards, if the totals are the same both players turn over two more cards. Game is over when there are no more cards to turn over.	
Vocabulary	
Doubles, doubles plus one, doubles plus 2	

Unit/Timeframe: Addition and Subtraction (Topic 5 and 6)* Approximately 4 weeks for conceptual unit **Topic 6:** Subtraction Facts to 20	**Grade Level: 1**
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).** • **Omit Lessons:** **6-1** *Making 10 to Subtract* **6-2** *More with Making 10 to Subtract*	
Content Standards	**2011 MA Curriculum Framework for Literacy**
1.OA.1: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions	N/A

1. OA.4: Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.* **1. OA.6:** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. **1.OA.8:** Determine the unknown whole number in an addition or subtraction equation relating three whole numbers		
Essential Questions	**Knowledge/Concepts**	**Skills**
What are some different strategies you can use to become fluent in subtraction through 20?	Understand relationship between addition and subtraction. **Misconceptions:** Placing the numerals in the correct order to subtract. Reading the number sentence correctly.	**Students will be able to:** Recognize that every subtraction fact has a related addition fact. Use a related addition fact to find the missing part in a subtraction problem. Draw pictures and write number sentences to solve addition and subtraction story problems.
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 203A and 203B **Additional Resources:** Math Literature/Trade books WEB SITE: **AVMR Resources for Number Sense and Computation –** http://learn.district196.org/course/view.php?id=1482		**enVisionMath Program:** ***Optional*** *-* *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks

Math Reads: *Handa's Surprise* *Apple Countdown* **Games**- *Race to Zero*- Place 20 counters in a cup and spill them onto the table. Sort the counters into groups of yellow and red. Create a line of red counters next to the yellow counters and determine the difference. The related subtraction number sentence is recorded. *Fact Family Game*- Roll two dice and write an addition sentence and then write the related subtraction fact.	Frequent observations
Vocabulary	
Related facts, fact family	

Unit/Timeframe:	**Topic 13:** Time	**Grade Level: 1**
Approximately 1 week		

Content Standards		**2011 MA Curriculum Framework for Literacy**
1.MD.3: Tell and write time in hours and half-hours using analog and digital clocks.		N/A
Essential Questions	**Knowledge/Concepts**	**Skills**
How can I use a clock to tell the time?	Understand that the short/hour hand indicates the hour.	**Students will be able to:**

	Understand that the long/minute hand indicates the minutes after the hour. Understand that time can be shown on an analog or digital clock. **Misconceptions:** Students may confuse the minute and hour hands. Students commonly misread the hour hand's position when at the half hour. Students may misread the hour labels as minutes (i.e. a minute hand pointing to a "2" actually means 10 minutes).	Identify and write time to the hour in two ways: o'clock and _:00. Identify and write time to the half hour. Show a given time on a model clock.
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 413A and 413B **Additional Resources:** Judy Clocks (especially geared models) Paper versions of digital clocks to manipulate Clock-face stamps		**enVisionMath Program:** ***Optional*** *-* *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks

Timers/stopwatches Math Literature/Trade books Ex.- *The Grouchy Lady Bug* *Math Reads: A Second is a Hiccup* **Games**- Various matching/memory games *Race to Noon*	Frequent observations
Vocabulary	
O'clock, minute, hour, hour hand, minute hand, half hour, analog clock, digital clock, schedule	

Unit/Timeframe: **Adding and Subtracting with Tens and Ones (Topics 10 and 11)***	**Grade Level: 1**
Approximately 4 weeks for conceptual unit	

Additional Notes

***Please consider this 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).**

- **Omit Lesson: 10-6** *Draw a Picture and Write a Number Sentence*
- **Optional Lesson: 11-5** Subtracting from a Two-Digit Number - "regrouping" unnecessary to meet standards) – can be used as enrichment

Content Standards	**2011 MA Curriculum Framework for Literacy**
1.NBT.4: Add within 100, including adding a two-digit number and a one-digit	N/A

number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and/or strategies. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. **1.NBT.6:** Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90(positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.		
Essential Questions	**Knowledge/Concepts**	**Skills**
How can I use place value to add and subtract?	Understand that in adding and subtracting 2-digit numbers one adds/subtracts tens and tens, ones and ones; sometimes it is necessary to compose a ten. Understand that there are patterns in place value that assist us in adding and subtracting.	**Students will be able to:** Compose or decompose a ten. Add and subtract multiples of ten using a hundreds chart and mentally.
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 323A and 323B (Topic 10) and 353A and 353B (Topic 11) **Additional Resources:** WEB SITE: **AVMR Resources for Number Sense and Computation –** http://learn.district196.org/course/view.php?id=1482		**enVisionMath Program:** ***Optional*** *-* *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks

Math Literature/Trade books Base Ten Blocks Hundreds Chart Anchor Charts **Games**- *Race to Zero*- Place 20 counters in a cup and spill them onto the table. Sort the counters into groups of yellow and red. Create a line of red counters next to the yellow counters and determine the difference. The related subtraction number sentence is recorded. *Race to a Flat (100)* Play *Race for a Flat*! Here are the rules. 1. This is a game for 2 teams of 2 players each. The object is to get enough tens and ones to trade for a flat worth 100. 2. One team rolls 2 number cubes. The players find the sum of the numbers they roll and take units to show that number. Then they put their units on a place—value mat. 3. If the team gets 10 ones or more, it trades 10 ones for a ten. 4. Teams take turns rolling, finding the sum, putting units on their mats, and Trading ones for tens. 5. As soon as a team gets blocks worth 100 or more, it makes a trade for l flat. The first team to do this wins. Clear your mats. Now play again. Be ready to talk about what you did to get a flat **Math Reads:** *Little Pea*	Frequent observations

Ready, Set, 100th Day *Two of Everything*	
Vocabulary	
Ten more, ten less, place value	

Unit/Timeframe: Approximately 2 weeks	**Topic 14:** Using Data to Answer Questions	**Grade Level: 1**

Additional Notes

- Teachers may wish to incorporate analysis of graphs throughout the school year, and spend a majority of the time for this Topic emphasizing the components of a graph and how/why to make one.

Content Standards	**2011 MA Curriculum Framework for Literacy**
1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	N/A

Essential Questions	**Knowledge/Concepts**	**Skills**
How can some problems be solved by making, reading, and analyzing a graph?	Understand that graphs help us see the meaning of data (like a math story). Understand that each type of graph is appropriate for certain kinds of data. Understand how real graphs,	**Students will be able to:** Ask and answer questions about the total number of data points. Ask and answer questions about how many in each category.

	pictographs, and bar graphs are the same and different. **Misconceptions:** Many students expect that the most important detail of a graph is "which has the most."	Ask and answer questions about how many more or less are in one category than in another. Ask and answer questions comparing categories. Collect and organize data. Make a real graph, pictograph, and a bar graph. Read and write tally marks.
Common Resources		**Common Assessments**
enVisionMath Program: *Interactive Digital Path* See *Math Background* 435A and 435B **Additional Resources:** Math Literature/Trade books Chart paper Pocket charts Blank graph paper Real world items Post-It Notes Rectangle magnets Surveys and clipboards		**enVisionMath Program:** ***Optional*** - *Quick Check* *Practice Master* *Problem Solving* *Topic Test* **Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations

Math Reads*:* *The Baseball Counting Book* *Five Creatures* *The Name Jar* *Over the Ocean* *A Second is a Hiccup* **Games**- Various dice and spinner activities to create graphs	

Vocabulary
Data, pictograph/picture graph, real graph, bar graph, tally mark

Unit/Timeframe:	**Special Topic:** Money	**Grade Level: 1**
Approximately 2 weeks		

Additional Notes
• Teachers should introduce the primary coins (pennies, nickels, dimes, and quarters) during the indicated Topics earlier in the year.

Content Standards		2011 MA Curriculum Framework for Literacy
1.MD. Ma5 Identify the values of all U.S. coins and know their comparative values (e.g., a dime is of greater value than a nickel). Find equivalent values (e.g., a nickel is equivalent to 5 pennies). Use appropriate notation (e.g., 69¢). Use the values of coins in the solutions of problems.		N/A
Essential Questions	**Knowledge/Concepts**	**Skills**
Can I name the coins and tell their value?	Understand the value of a penny, dime, nickel and quarter. Understand the equivalent and comparative values of coins. **Misconceptions:** The size of the coin does not reflect its value.	**Students will be able to:** Identify and name U.S. coins. Find equivalent values. Compare the values of coins. Use the correct notation to represent monetary amounts.
Common Resources		**Common Assessments**
Additional Resources: Math Literature/Trade books Special Topic Supplemental Unit materials **Math Reads:** *The Coin Counting Book* **Games**- Refer to unit resource packet		**Informal Assessments:** White boards Anecdotal assessments Journals/Notebooks Frequent observations
Vocabulary		
Penny, dime, nickel, quarter, value, cent, coins		