

**NEW BEDFORD PUBLIC SCHOOLS**  
**GRADE 2 - Mathematics Curriculum Map Cover**  
**2014 - 2015**

<b>Concept Focus Units:</b>	<b>Domains/Standards:</b>	<b>Time frame:</b>
<b><u>Opening Activities</u></b>	MA.2.MD.7a and across all domains	Beginning in September (continuing all year)
<b>Unit 1 <u>Place Value to 100</u></b>	NBT.1, NBT.2, NBT.3, NBT.4, NBT.8, OA.3, MD.8	Start of September to Late September
<b>Unit 2 <u>Geometry – Basic Shapes</u></b>	G.1	Last week of September
<b>Unit 3 <u>Basic Fact Strategies</u></b>	OA.2, MA.OA.2a, NBT.9	Begin in October - continue all year
<b>Unit 4 <u>Addition /Subtraction to 100</u></b> (including two-digit numbers)	NBT.5, NBT.6, NBT.9, OA.2, MA.OA.2a	October
<b>Unit 5 <u>Using Addition and Subtraction to 100</u></b>	OA.1	Early November to Mid- November
<b>Unit 6 <u>Data</u></b>	MD.10, MD.9	Mid-November to Mid-December
<b>Unit 7 <u>Geometry</u></b>	G.1, G.3	Mid-December to Late December
<b>Unit 8 <u>Place Value to 1000</u></b>	NBT.1a, NBT.1b, NBT.2, NBT.3, NBT.4	Beginning January to Mid January
<b>Unit 9 <u>Addition / Subtraction to 1000</u></b> (with up to three-digit numbers)	NBT.5, NBT.6, NBT.7. NBT.8, OA.1	Mid-January to Early March
<b>Unit 10 <u>Time</u></b>	MD.7, MA.2.MD.7a	Early March to Mid-March
<b>Unit 11 <u>Measurement and Data</u></b>	MD.1, MD.2, MD.3, MD.4, MD.5, MD.6	Mid-March to Late April
<b>Unit 12 <u>Money</u></b> Addition/Subtraction money problems	MD.8	Late April to Mid-May
<b>Unit 13 <u>Repeated Addition and Subtraction</u></b> (Models for Multiplication and Division)	OA.3, OA.4, G.2	Mid-May to Early June
<b><u>Review and Extend</u></b> Review and extend grade 2 curriculum	Selections from all Domains and standards	Early June to End of School
<b>Final assessments</b>	Basic Fact Assessment - OA.2, MA.OA.2a Final District Benchmark	June

NBPS Grade 2 Mathematics Curriculum Resources include: this cover sheet, the map section (pages 1 – 22), an appendix, and an opening activities packet is also available

\*The 2014-2015 NBPS math curriculum map is aligned to the NBPS standards-based report cards.

**September 2014**

## Grade 2

### New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015

*This NBPS Math Curriculum map reflects the MA 2011 Mathematics Curriculum Frameworks and is aligned to the Common Core State Standards. Recommendations are included for teaching resources (Real Math - RM) and suggested pacing. The Massachusetts 2011 Mathematics Curriculum Frameworks includes standards for mathematical content as well as the following eight standards of Mathematical practice.*

#### Standards for Mathematical Practice (SMP)

- |   |   |
|---|---|
| 1. Make sense of problems and persevere in solving them.            | 5. Use appropriate tools strategically.                   |
| 2. Reason abstractly and quantitatively.                            | 6. Attend to precision.                                   |
| 3. Construct viable arguments and critique the reasoning of others. | 7. Look for and make use of structure.                    |
| 4. Model with mathematics.  | 8. Look for and express regularity in repeated reasoning. |

The Standards for Mathematical Practice will need to be an integral part of mathematical instruction. Many resources are being developed to assist teachers in planning for the integration of these standards into lessons, learning activities, and assessments. See suggested websites noted below.

#### WIDA English Language Development standard 3 - The Language of Mathematics

English language learners **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**.

Unit plans will include specific Performance Indicators (PI) and performance tasks and lesson plans will need to include specific language objectives appropriate to the content and ELD level of students.

Below are some free and high quality resources available on the Internet for teachers. Please see additional online resources listed in the Map and Map Appendix.

Website:	Notes:
<a href="http://katm.org/wp/?page_id=91">http://katm.org/wp/?page_id=91</a>	Grade level “flip books” with suggestions for integration of Standards for Math Practice for each standard, explanation of the content standard, instructional strategy recommendations, student misconceptions to address, etc. Developed with NC, Ohio, and Arizona departments of education.
<a href="http://www.doe.mass.edu/frameworks/math/0311.pdf">http://www.doe.mass.edu/frameworks/math/0311.pdf</a>	Massachusetts 2011 Mathematics Curriculum Frameworks, which incorporate the Common Core State Standards for content and the standards of mathematical practice.
<a href="http://www.wida.us">www.wida.us</a>	WIDA standards for ELL students include specific standards for content areas such as math. This website has a downloadable library of helpful resources and information for teachers.
<a href="http://www.ati-online.com">www.ati-online.com</a> (select Galileo K-12)	Each teacher will receive access information to the Galileo K-12 program, which will be used for district math assessments and intervention options. Common unit assessments, district benchmark assessments, assessment analysis reports, instructional dialogs (instructional supports), and student histories will be available to support standards-based instruction in mathematics.
<a href="http://www.doe.mass.edu/candi/model/files.html">http://www.doe.mass.edu/candi/model/files.html</a>	Model Curriculum Units for ELA and Math developed by teachers and administrators in Massachusetts as examples of instructional units aligned to our standards and the Common Core State Standards. Units include unit plans, standards-based lesson plans, assessments, student handouts, etc.

**x = Meets the standard**

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September 2014

Majority of Students demonstrate thorough understanding of the basic concepts and skills.

## Grade 2

### New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015

**BEGINNING in SEPTEMBER (continuing all year)**

Domains: Measurement and Data, Number and Operations in Base Ten, Geometry,

<b>Opening Activities</b>											
<b>CONCEPT FOCUS: (Practice and Application of math concepts taught)</b>											
<b>Standards</b>	<b>Teaching Resources:</b>										
<p><b>MA.2.MD.7a Know the relationships of time, including seconds in a minute, minutes in an hour, hours in a day, days in a week, a month, and a year; and weeks in a month and a year.</b></p> <p>Identify parts of the day (e.g., morning, afternoon, evening), days of the week, and months of the year.</p> <ul style="list-style-type: none"> <li>• Perform the following calendar activities:               <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Locate day of week.</td> <td style="width: 50%;">Locate month of year.</td> </tr> <tr> <td>Name and write days of week.</td> <td>Name and write months of year.</td> </tr> <tr> <td>Identify dates using a calendar.</td> <td>Name day before, day after, a given day</td> </tr> <tr> <td>Identify weekend days.</td> <td>Name the date that is one week before or later</td> </tr> <tr> <td>Write date with words and number</td> <td>Write the date with only numbers (ex. 9/5/12)</td> </tr> </table> </li> </ul>	Locate day of week.	Locate month of year.	Name and write days of week.	Name and write months of year.	Identify dates using a calendar.	Name day before, day after, a given day	Identify weekend days.	Name the date that is one week before or later	Write date with words and number	Write the date with only numbers (ex. 9/5/12)	<p><b>Please note: Opening activities should eventually include math activities from all domains</b></p> <p>See suggested activities in <b>Opening Activities packet</b>, <i>Everyday Counts</i> (Heath), <i>Math Their Way</i> (Summary Newsletter), <u>Fun Calendar Activities</u> (Scholastic)</p> <p><b><i>Building Blocks</i> computer activities: Ordinal Construction Company</b></p>
Locate day of week.	Locate month of year.										
Name and write days of week.	Name and write months of year.										
Identify dates using a calendar.	Name day before, day after, a given day										
Identify weekend days.	Name the date that is one week before or later										
Write date with words and number	Write the date with only numbers (ex. 9/5/12)										
<p><b>Number and Operations in Base Ten:</b></p> <ul style="list-style-type: none"> <li>• Represent days of the month and then days of the school year using money, e.g., 15<sup>th</sup> day of the month – show 1 dime and 5 pennies, 3 nickels, 15 pennies, etc.</li> <li>• Name and read cardinal numbers (first month, fifth day, etc.)</li> <li>• Use base ten materials to show number of days in the month and days in the school year.</li> <li>• Count forward and backward from a given point on the calendar</li> <li>• Identify which number comes next</li> </ul>											
<p><b>Geometry:</b> recognize basic shapes</p> <ul style="list-style-type: none"> <li>• Use geometric shapes in patterns to display days of a month.</li> <li>• Students can identify shape patterns on a calendar and tell what comes next.</li> </ul>											
<p><b>Measurement and Data:</b> bar graphs, picture graphs, tally charts, etc.</p> <ul style="list-style-type: none"> <li>• Draw conclusions and make educated guesses by analyzing data from weather charts</li> <li>• Record data using bar graphs, tally charts, etc. For example, make a weather pictograph.</li> <li>• Ask students to use the graph to solve problems. Ex. How many more days has it been sunny than rainy or How many days has it been snowing or raining this month?</li> </ul>											

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## Grade 2

### New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015

START of SEPTEMBER to LATE SEPTEMBER

Domain: Number and Operations in Base Ten

#### Unit 1: Understand Place Value (up to 100)

*Cluster Heading: Understand Place Value*

<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>										
<p><b>2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:</b></p> <ul style="list-style-type: none"> <li>• <b>2.NBT.1a.100 can be thought of as a bundle of ten tens—called a “hundred.”</b></li> </ul>		<p><b>RM lessons:</b> 1.1, 1.3, 1.5, 1.8, 5.1 – 5.5</p> <p><b>RM game directory:</b> Appendix D1 – D23</p> <p><b>SRA game directory:</b> pages 405-407</p> <p><b>Suggested manipulatives:</b> base ten materials, and other appropriate manipulatives</p> <p><b>Building Blocks computer activities: Book Stacks</b></p>										
<ul style="list-style-type: none"> <li>• <b>Regroup ten ones to make a ten and ten tens to make 100</b></li> </ul>												
<p><b>2.NBT.3 Name and write numbers to 1000 using base-ten numerals, number names, and expanded form.</b></p>												
<ul style="list-style-type: none"> <li>• Match the <u>numerals</u> 100 or less to base ten materials or pictures of base ten materials.</li> </ul>												
<ul style="list-style-type: none"> <li>• Match the <u>number word</u> 100 or less to base ten materials, pictures of base ten materials, and to the numerals</li> </ul>												
<ul style="list-style-type: none"> <li>• Identify number words (e.g., find the word three).</li> </ul>												
<ul style="list-style-type: none"> <li>• Read and write numbers to 100</li> </ul>												
<ul style="list-style-type: none"> <li>• Identify the value of a digit in the number 100 or less.</li> </ul>												
<ul style="list-style-type: none"> <li>• Relate base ten materials to expanded form:</li> </ul> <div style="margin-left: 40px;"> <table style="border: none;"> <tr> <td style="text-align: center;">   </td> <td style="text-align: center;">. . . . .</td> </tr> <tr> <td style="text-align: center;">2 tens + 6 ones =</td> <td></td> </tr> <tr> <td style="text-align: center;">20 + 6 =</td> <td></td> </tr> <tr> <td style="text-align: center;">twenty-six =</td> <td></td> </tr> <tr> <td style="text-align: center;">26</td> <td></td> </tr> </table> </div>			. . . . .	2 tens + 6 ones =		20 + 6 =		twenty-six =		26		
	. . . . .											
2 tens + 6 ones =												
20 + 6 =												
twenty-six =												
26												
<ul style="list-style-type: none"> <li>• Use base ten materials to show a certain two-digit number</li> </ul>												
<p><b>2.NBT.2 Count within 1000, skip-count by 5’s, 10’s, and 100’s</b></p>		<p><b>RM lessons:</b> 1.1, 1.3 (Counting and Writing Game), 1.9, Ch 2 Cumulative Review,</p> <p><b>Building Blocks computer activities: Rocket Blast 2, Clean the Plates,</b></p>										
<ul style="list-style-type: none"> <li>• Count by 1’s to 100</li> </ul>												
<ul style="list-style-type: none"> <li>• Skip count by 5’s and 10’s to at least 50 starting at any number (count by 5’s from 20 to 50)</li> </ul>												

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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**BEGINNING of SEPTEMBER to LATE SEPTEMBER**

Domains: Number and Operations in Base Ten, Measurement and Data

<b>Unit 1: Understand Place Value (up to 100) - continued</b>		
<i>Cluster Heading: Understand Place Value</i>		
<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources/Strategies</b>
<b>2.NBT.4 Compare two three-digit numbers based on meanings of hundreds, tens, and ones digits, using <math>&gt;</math>, <math>&lt;</math>, and <math>=</math> symbols to record the results of comparisons.</b>		<b>RM lessons:</b> 1.5,1.9, Cum. Rev. p.30, <b>RM game directory:</b> Appendix D1 – D23
<ul style="list-style-type: none"> <li>• Order the amounts 100 or less using base ten materials or pictures of base ten materials, from smallest to largest or largest to smallest.</li> </ul>		
<ul style="list-style-type: none"> <li>• Order the amounts 100 or less using paper and pencil.</li> </ul>		
<ul style="list-style-type: none"> <li>• Use the symbols <math>&lt;</math>, <math>&gt;</math>, and <math>=</math> to compare two numbers or two sets of objects, first using base ten materials and then paper and pencil, 100 or less.</li> </ul>		
<ul style="list-style-type: none"> <li>• Identify the numbers that come before, between and after the numbers 1-99</li> </ul>		
<i>Cluster Heading: Use place value understanding and properties of operations to add and subtract.</i>		
<b>2.NBT.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</b>		<u><b>Mental Math in the Primary Grades</b></u> Hope, Leutzinger, Reys and Reys  <b>Suggested Website:</b> National Library of Virtual
<ul style="list-style-type: none"> <li>• Demonstrate in the classroom an understanding of and the ability to use mental math for addition and subtraction.</li> </ul>		
<ul style="list-style-type: none"> <li>• Demonstrate the ability to mentally add 10 and 100 to a number</li> </ul>		
<ul style="list-style-type: none"> <li>• Demonstrate the ability to mentally subtract 10 and 100 from a number.</li> </ul>		
<i>Cluster Heading: Work with money</i>		
<u><b>Apply Place Value Understanding</b></u> <b>2.MD.8 Solve word problems involving <u>dollar bills</u>, <u>quarters</u>, <u>dimes</u>, <u>nickels</u> and <u>pennies</u>, using <math>\\$</math> and <math>\text{¢}</math> symbols appropriately. Example: If you have two dimes and three pennies, how many cents do you have?</b>		<b>RM lessons:</b> 1.5, Ch. 2 Cumulative review, Ch. 2 Practice Test, Practice 5.1, Practice 5.3, <b>RM game directory:</b> Appendix D1 – D23  <b>Suggested manipulatives:</b> play money and other appropriate manipulatives
<ul style="list-style-type: none"> <li>• Use <u>dimes</u>, and <u>pennies</u> to represent numbers of cents to 99 (base ten system). Find the value of a collection of dimes and pennies up to an amount of \$1.00.</li> </ul>		
<ul style="list-style-type: none"> <li>• Identify bills \$1 and \$10 and use them to show amounts of money up to \$100</li> </ul>		
<ul style="list-style-type: none"> <li>• Read amounts of money to one dollar or less.</li> </ul>		
<ul style="list-style-type: none"> <li>• Write amounts of money to one dollar or less. Use appropriate notation, e.g., 69¢, \$1.35.</li> </ul>		

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## Grade 2

### New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015

**LAST WEEK in SEPTEMBER**

Domain: Geometry

#### Unit 2: **Geometry**

*Cluster Heading: Reason with shapes and their attributes*

**Please note:** At this time the focus of Geometry is to review the names and characteristics of the basic shapes in order to find geometric patterns and use correct vocabulary with manipulatives, e.g., pattern blocks.

<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>
<p><b>2.G.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. (Footnote: Sizes are compared directly or visually, not compared by measuring.)</b></p>		<p>See <b>Geometry packet</b>  <b>RM game directory:</b> Appendix D1 – D23</p> <p><b>Suggested manipulatives:</b> pattern blocks, attribute blocks, tangrams, geometric solids (cone, cylinder, cube, etc.), and other appropriate manipulatives</p> <p><b>Suggested Website:</b> National Library of Virtual Manipulatives -Pattern Blocks, Geoboards, Tangrams, etc.</p>
<ul style="list-style-type: none"> <li>• Know that two-dimensional figures are flat.</li> </ul>		
<ul style="list-style-type: none"> <li>• Identify the following two-dimensional figures: triangle, square, rectangle, hexagon, pentagon, rhombus, and trapezoid.</li> </ul>		
<ul style="list-style-type: none"> <li>• Identify the number of sides, length of sides, and number of corners of two-dimensional figures: triangle, square, rectangle, hexagon, pentagon, parallelogram, rhombus, and trapezoid.</li> </ul>		
<ul style="list-style-type: none"> <li>• Identify the cube and describe its attributes (e.g., length of sides, number of corners, edges, and faces).</li> </ul>		
<ul style="list-style-type: none"> <li>• Identify, describe, draw, and compare two-dimensional shapes.</li> </ul>		
<ul style="list-style-type: none"> <li>• Identify and describe two-dimensional shapes: triangle, square, rectangle, hexagon, pentagon, octagon, parallelogram, rhombus, trapezoid, and circle.</li> </ul>		
<ul style="list-style-type: none"> <li>• Trace or draw using dot paper, two-dimensional shapes with given attributes.</li> </ul>		

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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**BEGIN in OCTOBER and CONTINUE ALL YEAR**

Domains: Number and Operations in Base Ten, Operations and Algebraic thinking

Unit 3: <b>Basic Fact Strategies</b> (Addition and Subtraction within 20)		
<b>Basic Facts (Basic Facts fluency will be assessed for Addition and Subtraction at the end of the year)</b>		
<p><b>Please note:</b> <u>Basic Facts</u> need to be introduced once the concept of the operation has been understood and students have mental math strategies to correctly compute the answer. Once they understand the operation and have a correct strategy, they will need continuous practice to keep their skills sharp. The strategies listed below can be started in September and incorporated into lessons as appropriate.</p>		
<i>Cluster Heading: Add and Subtract within 20</i>		
STANDARDS: Number Sense and Operations	M	Teaching Resources/Strategies
<p><b>2.OA.2</b> Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. (Footnote: See 1.AO.6 for a list of mental strategies.)</p> <p><b>2.OA.2a</b> By the end of Grade 2, know from memory related subtraction facts of sums of two one-digit numbers.</p>		<p><b>*<u>See RM teacher’s manual appendix A11- A13, B6.</u></b></p> <p><b>RM:</b> Appendix D1 – D23:</p> <p><b>Math facts programs:</b> e.g. <i>MathFacts in a Flash</i>, <i>Mastering Math Facts</i>, other appropriate program</p> <p><b><u>Mental Math in the Primary Grades</u></b> Hope, Leutzinger, Reys and Reys</p>
<ul style="list-style-type: none"> <li>• count on (count up SRA) especially count on 1, 2, or 3 more.</li> </ul>		<b>RM lessons:</b> 1.7,1.8,
<ul style="list-style-type: none"> <li>• doubles</li> </ul>		<b>RM lessons:</b> 2.4
<ul style="list-style-type: none"> <li>• near doubles (doubles plus 1)</li> </ul>		<b>RM lessons:</b> 2.5
<ul style="list-style-type: none"> <li>• Commutative property ( 3 + 4 = 4 + 3)</li> </ul>		<b>RM lessons:</b> 2.2
<ul style="list-style-type: none"> <li>• Using tens</li> </ul>		<b>RM lessons:</b> 2.3 <b>Recommended manipulative:</b> Ten Frames
<ul style="list-style-type: none"> <li>• count back</li> </ul>		<b>RM lessons:</b> 1.7,1.8
<ul style="list-style-type: none"> <li>• count up (missing addend)</li> </ul>		<b>RM lessons:</b> 2.6(applied to function tables), 3.1
<ul style="list-style-type: none"> <li>• Use related addition facts</li> </ul>		<b>RM lessons:</b> 3.2 -3.7
<i>Cluster Heading: Use place value understanding and properties of operations to add and subtract.</i>		
<p><b>2.NBT.9</b> Explain why addition and subtraction strategies work, using place value and the properties of operations. (Footnote: Explanations may be supported by drawings or objects</p>		<p><b>RM lessons:</b> 1.7,1.8,2.1,2.2</p> <p><b>RM game directory:</b> Appendix D1 – D23</p> <p><b>Suggested manipulatives:</b> base ten materials, color tiles, Cuisenaire rods, and other appropriate manipulatives</p> <p><b>Suggested Website:</b> National Library of Virtual Manipulatives</p>
<ul style="list-style-type: none"> <li>• Explain with manipulatives, drawings, or words how to add or subtract two one-digit numbers using place value and the properties of operations.</li> </ul>		

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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**OCTOBER**

Domain: Number and Operations in Base Ten

**Unit 4: Addition and Subtraction to 100**

*Cluster Heading: Use Place Value Understanding and Properties of Operations to Add and Subtract*

<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources/Strategies</b>
<b>2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</b>		<b>RM lessons:</b> 1.10 <b>RM game directory:</b> Appendix D1 – D23
<ul style="list-style-type: none"> <li>• Understand and use the inverse relationship between addition and subtraction (e.g., <math>8 + 6 = 14</math> is equivalent to <math>14 - 6 = 8</math> and is also equivalent to <math>14 - 8 = 6</math>) to solve problems and check solutions.</li> <li>• Using base ten materials, a balance, or Cuisenaire rods, discover the inverse relationship between equations (number sentences). <i>(An equation is a mathematical sentence that tells you that two expressions are equal. It uses an equal sign and is written horizontally.)</i></li> </ul>		<b>Suggested manipulatives:</b> base ten materials, balance, Cuisenaire rods, and other appropriate manipulatives
<b>2.NBT.6 Add up to four 2-digit numbers using strategies based on place value and properties of operations.</b>		<b>RM lessons:</b> 5.1 – 5.12, 6.1-6.8, 6.10
<ul style="list-style-type: none"> <li>• Demonstrate with base ten materials how to add and subtract 2-digit numbers with and without regrouping and record the process in pictures.</li> <li>• Accurately, add and subtract 2–digit numbers, with and without regrouping, using base ten materials and then paper and pencil.</li> <li>• Estimate, calculate, and solve problems involving addition and subtraction of two-digit numbers. Describe differences between estimates and actual calculations.</li> <li>• Identify one more, one less, ten more, or ten less than a given number (solution in the range of 0-100).</li> <li>• Estimate solutions to problems involving addition and subtraction of two-digit numbers after numerous experiences with calculating addition and subtraction.</li> <li>• Describe the difference between estimates and actual calculations.</li> </ul>		<b>RM game directory:</b> Appendix D1 – D23  <b>Suggested manipulatives:</b> base ten materials, hundreds charts, money (\$1, dimes, pennies)
<b>2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. (Footnote: Explanations may be supported by drawings or objects)</b>		<b>RM Lesson:</b> 5.1, Get to 100 by Tens or Ones game, 5.6, Practice 5.6, 5.7,
<ul style="list-style-type: none"> <li>• Explain with manipulatives, drawings, or words how to add or subtract two two-digit numbers using place value and the properties of operations.</li> </ul>		<b>Suggested manipulatives:</b> base ten materials, hundreds charts, money (\$1, dimes, pennies) <b>Building Blocks computer activities: Math O’ Scope</b>

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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**OCTOBER**

Domain: Number and Operations in Base Ten

Unit 4: <b>Addition and Subtraction to 100</b> - continued		
<i>Cluster Heading: Add and subtract within 20</i>		
<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>
<b><u>Application to addition of multi-digit numbers</u></b>		<b>RM lessons:</b> 2.6 – 2.9, 3.1 – 3.7 <b>RM game directory:</b> Appendix D1 – D23  <b>Suggested manipulatives:</b> base ten materials  <b>Building Blocks computer activities:</b> Eggsellent Addition Choice, Pizza Pizzaz 5, Barkley’s Bones, Lots o’ socks,
<b>2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. (Footnote: See 1.AO.6 for a list of mental strategies.)</b>		
<b>2.OA.2a By the end of Grade 2, know from memory related subtraction facts of sums of two one-digit numbers.</b>		
<ul style="list-style-type: none"> <li>• Know addition facts (addends to ten) and related subtraction facts, and use them to solve problems.</li> </ul>		
<ul style="list-style-type: none"> <li>• Memorize the basic addition facts, single digits to 9 and the corresponding subtraction facts after extensive practice using base ten materials.</li> </ul>		
<ul style="list-style-type: none"> <li>• Solve one step addition and subtraction problems using data from simple charts and picture graphs, first using base ten materials, and then paper and pencil.</li> </ul>		
<ul style="list-style-type: none"> <li>• Solve basic word problems involving sums and differences to 100 or less, after extensive practice using base ten materials.</li> </ul>		

x = **Meets the standard**

Majority of Students demonstrate thorough understanding of the basic concepts and skills.

**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**EARLY NOVEMBER to MID-NOVEMBER**

Domain: Operations and Algebraic Thinking

**Unit 5: Using Addition and Subtraction to 100**

*Cluster Heading: Represent and solve problems involving addition and subtraction*

<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>
<p><b>2.OA.1 Use addition and subtraction within 100 to solve one and two step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. (Footnote: See Map Appendix - table 1 – for examples)</b></p>		<p><b>RM lessons:</b> 1.7,1.8,2.1,2.2, 2.6, 2.7, 2.8, 2.9, Ch. 2 Exploring Problem Solving, Ch. 2 Key Ideas Review, Ch. 2 Thinking Story TM p. 77 – 78, 3.1 – 3.7, Ch. 3 Exploring Problem Solving, Ch. 3 Key Ideas Review, Ch. 5, Ch. 6</p> <p><b>RM game directory:</b> Appendix D1 – D23</p> <p><b>Suggested manipulatives:</b> base ten materials, color tiles, Cuisenaire rods, and other appropriate manipulatives</p> <p><b>Suggested Website:</b> National Library of Virtual Manipulatives</p> <p><b>Building Blocks computer activities: Math O’ Scope</b></p>
<ul style="list-style-type: none"> <li>• Demonstrate an understanding of various meanings of addition and subtraction using base ten materials and then paper and pencil.</li> </ul>		
<ul style="list-style-type: none"> <li>• Know addition and subtraction terms: addends, sum, plus sign, equal sign, difference, and minus sign.</li> </ul>		
<ul style="list-style-type: none"> <li>• Demonstrate an understanding of various meanings of addition and subtraction, e.g., addition as adding to and putting together (plus, combined with, more); subtraction as comparison (how much less, how much more), equalizing (how many more are needed to make these equal), and taking from (how much remaining).</li> </ul>		
<ul style="list-style-type: none"> <li>• Given a word problem students record the situation a drawing or diagram and as an equation.</li> </ul>		
<ul style="list-style-type: none"> <li>• Given a word problem students represent the situation as an equation using a symbol for the unknown number.</li> </ul>		
<ul style="list-style-type: none"> <li>• Construct and solve open sentences that have variables, e.g., <math>\square + 7 = 10</math>.</li> </ul>		
<ul style="list-style-type: none"> <li>• Given an equation such as <math>6 + \_ = 13</math>, students should be able to write an appropriate word problem.</li> </ul>		
<ul style="list-style-type: none"> <li>• Create and solve equations (number sentences) involving the numbers 31 or less, first using a balance or Cuisenaire rods, and then paper and pencil.</li> </ul>		
<ul style="list-style-type: none"> <li>• Explore and develop “What’s My Rule” equations from input output tables and function machines.</li> </ul>		

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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**MID-NOVEMBER to MID-DECEMBER**

Domain: Measurement and Data

Unit 6: <b>Data</b>																																																														
<i>Cluster Heading: Represent and interpret data</i>																																																														
<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>																																																												
<b>2.MD.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems, using information presented in a bar graph.</b>		<b>RM lessons:</b> 4.6,4.7,4.9,4.10,4.11,4.12 <b>RM game directory:</b> Appendix D1 – D23																																																												
• Collect information by taking surveys, conducting interviews, and making observations.																																																														
• Organize this information using, bar graphs. Discuss the results.																																																														
• Apply an understanding of addition to answer combination questions using graph data, e.g., How many students chose red or blue for their favorite color?																																																														
• Apply an understanding of the comparison model for subtraction to interpret bar graphs, e.g., how much shorter is the blue bar than the red bar? How many more students chose pizza than hamburger?																																																														
<b>2.MD.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.</b>		<b>Suggested Activities: Measure classroom objects, items related to science observations, lengths of different books, etc.</b> <b>RM lessons:</b> 4.4																																																												
• Measure and record various items to the nearest whole number of units.																																																														
• Mark a line plot to show whole-unit measurements of objects.																																																														
• Measure common items from the classroom or science observations to the nearest inch. Show the measurement data using a line plot with horizontal scale marked off in whole-number units.																																																														
<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="10" style="text-align: center;">Objects in my classroom</th> </tr> </thead> <tbody> <tr> <td style="text-align: right;">5</td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">4</td> <td style="text-align: center;">X</td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">3</td> <td style="text-align: center;">X</td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">2</td> <td style="text-align: center;">X</td> <td></td> <td style="text-align: center;">X</td> <td></td> <td style="text-align: center;">X</td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">1</td> <td style="text-align: center;">X</td> <td></td> <td style="text-align: center;">X</td> <td></td> <td style="text-align: center;">X</td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> </tbody> </table> <p style="text-align: center;">Pencil   crayon   eraser   glue stick</p>			Objects in my classroom										5	X									4	X		X							3	X		X				X			2	X		X		X		X			1	X		X		X		X		
Objects in my classroom																																																														
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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**MID-DECEMBER to LATE DECEMBER**

Domain: Geometry

<b>Unit 7: Geometry</b>		
<i>Cluster Heading: Reason with shapes and their attributes</i>		
<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>
<b>2.G.1 Recognize and draw shapes having specified attributes such as a given number of angles or a given number of faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. (Footnote: Sizes are compared directly or visually, not compared by measuring.)</b>		<b>RM lessons:</b> 8.1,8.4,8.8,8.9,8.10, <b>RM game directory:</b> Appendix D1 – D23
<ul style="list-style-type: none"> <li>• Describe attributes and parts of triangles, quadrilaterals, pentagons, hexagons, and cubes. e.g., length of sides, number of corners, edges, faces and sides.</li> </ul>		<b>Suggested website:</b> National Library of Virtual Manipulatives
<ul style="list-style-type: none"> <li>• Identify, describe, draw, and compare two-dimensional shapes.</li> </ul>		
<b>2.G.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words <i>halves</i>, <i>thirds</i>, <i>half of</i>, <i>a third of</i>, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</b>		<b>RM lessons:</b> 7.1,7.2, 7.3, 7.6 Fraction Game, 8.2, <b>Suggested manipulatives:</b> fraction circles, fraction squares, fraction bars,
<ul style="list-style-type: none"> <li>• Predict the results of putting shapes together and taking them apart.</li> </ul>		<b>RM game directory:</b> Appendix D1 – D23
<ul style="list-style-type: none"> <li>• Investigate shapes by putting them together and taking them apart using manipulatives (pattern blocks, tangrams, etc.)</li> </ul>		<b>Suggested website:</b> National Library of Virtual Manipulatives

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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**BEGINNING of JANUARY to MID-JANUARY**

Domain: Number and Operations in Base Ten

<b>Unit 8: Place Value to 1000</b>		
<i>Cluster Heading: Understand Place Value</i>		
<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources/Strategies</b>
<p><b>2NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:</b></p> <ul style="list-style-type: none"> <li>• <b>2.NBT.1a.100 can be thought of as a bundle of ten tens—called a “hundred.”</b></li> <li>• <b>2.NBT.1b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).</b></li> </ul>		<p><b>RM lessons:</b> 9.1, 9.2, 9.3, 9.4</p> <p><b>RM game directory:</b> Appendix D1 – D23</p> <p><b>Suggested manipulatives:</b> base ten materials and other appropriate manipulatives</p> <p><b>Suggested Website:</b> National Library of Virtual Manipulatives</p>
<ul style="list-style-type: none"> <li>• Use base ten to demonstrate place value.</li> </ul> <div style="display: flex; justify-content: space-around; align-items: center; text-align: center;"> <div style="margin: 10px;">               One hundred 100         </div> <div style="margin: 10px;">               one ten 10         </div> <div style="margin: 10px;">               one unit (ones) 1         </div> </div>		
<ul style="list-style-type: none"> <li>• Name and write (in numerals) whole numbers to 1000, identify the place values of the digits, and order the numbers.</li> </ul>		
<ul style="list-style-type: none"> <li>• Match the <u>numerals</u> 1,000 or less to base ten materials or pictures of base ten materials.</li> </ul>		
<ul style="list-style-type: none"> <li>• Order the amounts 1,000 or less, using base ten materials, from smallest to largest or largest to smallest.</li> </ul>		
<ul style="list-style-type: none"> <li>• Order the amounts 1,000 or less using paper and pencil.</li> </ul>		
<ul style="list-style-type: none"> <li>• Identify the value of a digit in the number 1,000 or less.</li> </ul>		
<b>2.NBT.2 Count within 1000, skip-count by 5’s, 10’s, and 100’s</b>		
<ul style="list-style-type: none"> <li>• Skip count by 100’s to 1,000</li> </ul>		

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## Grade 2

### New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015

BEGINNING of JANUARY to MID-JANUARY

Domain: Number and Operations in Base Ten

#### Unit 8: Place Value to 1000 - continued

*Cluster Heading: Understand Place Value*

STANDARDS:	M	Teaching Resources/Strategies
<b>2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.</b>		<b>RM lessons:</b> 9.1, 9.2, 9.3,  <b>RM game directory:</b> Appendix D1 – D23  <b>SRA game directory:</b> pages 405-407  <b>Suggested manipulatives:</b> base ten materials, and other appropriate manipulatives
<ul style="list-style-type: none"> <li>• Match the <u>numerals</u> 1000 or less to base ten materials or pictures of base ten materials.</li> <li>• Match the <u>number word</u> 1000 or less to base ten materials, pictures of base ten materials, and to the numerals</li> <li>• Read and write numbers to 1000</li> <li>• Identify the value of a digit in the number 1000 or less.</li> <li>• Relate base ten materials to expanded form:</li> </ul>		
 $= 3 \text{ hundreds} + 2 \text{ tens} + 6 \text{ ones} =$		
$300 + 20 + 6 = \text{three hundred twenty-six} = 326$		
<ul style="list-style-type: none"> <li>• Translate between various representations of 3-digit numbers, e.g., <math>326 = 300 + 20 + 6</math>.</li> <li>• Use base ten materials to show a certain three-digit number</li> </ul>		
<b>2.NBT.4 Compare two 3-digit numbers based on meanings of hundreds, tens, and ones digits, using <math>&gt;</math>, <math>&lt;</math>, and <math>=</math> symbols to record the results of comparisons.</b>		<b>RM lessons:</b> 6.9, 9.3, 12.6  <b>RM game directory:</b> Appendix D1 – D23  <b>Suggested manipulatives:</b> base ten materials and other appropriate manipulatives
<ul style="list-style-type: none"> <li>• Compare whole numbers using terms and symbols, e.g., less than, equal to, greater than (<math>&lt;</math>, <math>=</math>, <math>&gt;</math>).</li> <li>• Use the symbols <math>&lt;</math>, <math>&gt;</math>, and <math>=</math> to compare numbers to 1000 or less first using base ten materials and then paper and pencil.</li> <li>• Identify the numbers that come before, between, and after the numbers 1-1000.</li> <li>• Write number sentences using <math>+</math>, <math>-</math>, <math>&lt;</math>, <math>&gt;</math>, and/or <math>=</math> to represent mathematical relationships in everyday situations.</li> </ul>		

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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**MID-JANUARY to EARLY MARCH**

Domain: Number and Operations in Base Ten

**Unit 9: Addition and Subtraction to 1000**

*Cluster Heading: Use Place Value Understanding and Properties of Operations to Add and Subtract*

<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>
<b>2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</b>		<b>RM lessons:</b> 9.4- 9.10 <b>RM game directory:</b> Appendix D1 – D23  <b>Suggested manipulatives:</b> base ten materials, money (\$1, \$10, \$100, \$1000) or (\$1, dimes and pennies) and other appropriate manipulatives
<ul style="list-style-type: none"> <li>• Demonstrate the ability to add and subtract two-digit numbers accurately and efficiently.</li> </ul>		
<ul style="list-style-type: none"> <li>• Demonstrate with base ten materials how to add and subtract two-digit numbers with and without regrouping and record the process in pictures.</li> </ul>		
<ul style="list-style-type: none"> <li>• Apply understanding of 2.NBT.5 to explore addition and subtraction, with and without regrouping, two three-digit numbers using base ten materials.</li> </ul>		
<ul style="list-style-type: none"> <li>• Add and subtract two three-digit numbers using paper and pencil.</li> </ul>		
<b>2.NBT.6 Add up to four 2-digit numbers using strategies based on place value and properties of operations.</b>		<b>RM lessons:</b> 9.4-9.12 <b>RM game directory:</b> Appendix D1 – D23  <b>Suggested Website:</b> National Library of Virtual Manipulatives
<ul style="list-style-type: none"> <li>• Demonstrate in the classroom an understanding of and the ability to use the conventional algorithms for addition (up to four 2-digit numbers).</li> </ul>		
<ul style="list-style-type: none"> <li>• Demonstrate with base ten materials how to add and up to four 2-digit numbers with and without regrouping and record the process in pictures.</li> </ul>		
<ul style="list-style-type: none"> <li>• Estimate, calculate, and solve problems involving addition of up to two-digit numbers. Describe differences between estimates and actual calculations.</li> </ul>		
<ul style="list-style-type: none"> <li>• Estimate solutions to problems involving addition and subtraction of two 3-digit numbers after numerous experiences with base ten materials and two-digit numbers calculating addition and subtraction.</li> </ul>		

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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**MID-JANUARY to EARLY MARCH**

Domains: Number and Operations in Base Ten, Operations and Algebraic Thinking

<b>Unit 9: Addition and Subtraction to 1000 - continued</b>		
<i>Cluster Heading: Use Place Value Understanding and Properties of Operations to Add and Subtract</i>		
<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>
<p><b>2NBT.7 Add and subtract within 1000, 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. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.</b></p> <ul style="list-style-type: none"> <li>• Demonstrate the ability to add and subtract three-digit numbers accurately and efficiently.</li> <li>• Understand that when adding and subtracting, you must combine like terms, e.g., ones with ones and tens with tens. Once a group of ten units is made it must be renamed in standard notation.</li> </ul>	<p></p>	<p><b>RM lessons: 9.5, 9.6, 9.7, 9.9,</b></p> <p>MA Model Curriculum Unit: To Compose or Decompose – That is the Question Unit.(NBT 7, NBT9)</p> <p><b>Suggested manipulatives:</b> base ten materials, hundreds charts, money (\$1, dimes, pennies)</p> <p><b>Building Blocks computer activities: Math O’ Scope</b></p>
<p><b>2.NBT.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</b></p> <ul style="list-style-type: none"> <li>• Demonstrate in the classroom an understanding of and the ability to use mental math for addition and subtraction.</li> <li>• Demonstrate the ability to mentally add 10 and 100 to a number</li> <li>• Demonstrate the ability to mentally subtract 10 and 100 from a number.</li> </ul>	<p></p>	<p><b>RM lessons: 9.4,9.6,9.10,9.11,</b></p>
<p><b>2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. (Footnote: Explanations may be supported by drawings or objects</b></p> <ul style="list-style-type: none"> <li>• Explain with manipulatives, drawings, or words how to add or subtract two three-digit numbers using place value and the properties of operations.</li> </ul>	<p></p>	<p><b>RM Lessons:</b> Integrated into Unit 9 lessons</p> <p><b>Suggested manipulatives:</b> base ten materials, hundreds charts, money (\$1, dimes, pennies)</p> <p><b>Building Blocks computer activities: Math O’ Scope</b></p>

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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**MID-JANUARY to EARLY MARCH**

Domains: Number and Operations in Base Ten, Operations and Algebraic Thinking

**Unit 9: Using Addition and Subtraction to 1000 - continued**

*Cluster Heading: Represent and solve problems involving addition and subtraction*

**Please note:** Students will need continued practice translating real life problem situations into math equations and solving word problems throughout the school year. In this unit students can continue to work to develop problem solving skills and operation sense. Students who have mastered addition of two-digit numbers can extend their learning to apply 2.OA.1 to three-digit numbers.

<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>
<p><b>2.OA.1 Use addition and subtraction within 100 to solve one and two step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. (Footnote: See Map Appendix table 1)</b></p> <ul style="list-style-type: none"> <li>• Demonstrate an understanding of various meanings of addition and subtraction using base ten materials and then paper and pencil.</li> <li>• Know addition and subtraction terms: addends, sum, plus sign, equal sign, difference, and minus sign.</li> <li>• Demonstrate an understanding of various meanings of addition and subtraction, e.g., addition as adding to and putting together (plus, combined with, more); subtraction as comparison (how much less, how much more), equalizing (how many more are needed to make these equal), and taking from (how much remaining).</li> <li>• Given a word problem students record the situation a drawing or diagram and as an equation.</li> <li>• Given a word problem students represent the situation as an equation using a symbol for the unknown number.</li> </ul>	<p><b>M</b></p>	<p><b>RM lessons:</b> Ch.5, Ch.6, Ch. 6 Key Ideas,</p> <p><b>RM game directory:</b> Appendix D1 – D23</p> <p><b>Suggested manipulatives:</b> base ten materials, color tiles, Cuisenaire rods, and other appropriate manipulatives</p> <p><b>Suggested Website:</b> National Library of Virtual Manipulatives</p> <p><b>Building Blocks computer activities: Math O’ Scope</b></p>

**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**EARLY MARCH to MID-MARCH**

Domain: Measurement and Data

<b>Unit 10: Time</b>		
<i>Cluster Heading: Work with Time .....</i>		
<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources/Strategies</b>
<b>2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</b>		<b>RM lessons:</b> 7.9, 10.10,
• Tell and write time to the nearest five minutes		<b>RM game directory:</b> Appendix D1 – D23
• Apply 2.NBT.2 (count by 5’s) to telling time		<b>Suggested Manipulatives:</b> Clocks (recommend clocks with gear to show placement of hour hand as minute hand moves)  <b>Suggested Website:</b> National Library of Virtual Manipulatives
• Use a clock to show how the minute hand moves “clockwise”.		
• Explain what a.m. and p.m. means in their own words, e.g., a.m. is in the morning and p.m. is after lunch to nighttime.		
• Recognize that the hour hand is moving as the minute hand moves, e.g., build on the grade 1 concept that when it is 5:30 the hour hand is half “Past” the 5 and between 5 and 6 when the minute hand is on the 6.		

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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**MID-MARCH to LATE APRIL**

**DOMAIN: MEASUREMENT and DATA**

**Unit 11: Measurement and Data**

*Cluster Heading: Measure and estimate lengths in standard units*

<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>								
<b>2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.</b> <ul style="list-style-type: none"> <li>• Select and use appropriate tools to solve a measurement problem (ruler, yard sticks, meter sticks, and measuring tapes.).</li> </ul>	x	<b>RM lessons:</b> 10.1 <b>RM game directory:</b> Appendix D111 – D23								
<b>2.MD.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.</b> <ul style="list-style-type: none"> <li>• Measure and compare common objects using metric and English units of length measurement, e.g., centimeter, and inch.</li> <li>• Make measurements using non-standard units to demonstrate an understanding of length</li> <li>• Make linear measurements in feet and inches, and in meters and centimeters. Determine the longest and shortest.</li> <li>• Learn that 12 inches equals one foot, three feet equals one yard, and 100 centimeters equals one meter.</li> <li>• Estimate length of lines and measure to confirm. (<i>Estimating must always be done after numerous experiences with measuring. If not, it is only guessing!</i>).</li> <li>• Compare lengths of common objects using metric and English units.</li> <li>• Describe how the size of the unit relates to the number of units needed to measure the same item, e.g., a desk is 2 feet wide but 24 inches wide because inches are smaller than a foot, it takes more units to measure the same item.</li> <li>• Use tables to show simple within unit conversions, e.g.               <table border="1" style="margin-left: 20px; border-collapse: collapse; width: 150px;"> <thead> <tr> <th style="padding: 2px;">Number of feet</th> <th style="padding: 2px;">Number of Inches</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 2px;">1</td> <td style="text-align: center; padding: 2px;">12</td> </tr> <tr> <td style="text-align: center; padding: 2px;">2</td> <td style="text-align: center; padding: 2px;">24</td> </tr> <tr> <td style="text-align: center; padding: 2px;">3</td> <td style="text-align: center; padding: 2px;">36</td> </tr> </tbody> </table> </li> </ul>	Number of feet	Number of Inches	1	12	2	24	3	36	x	<b>RM lessons:</b> 4.1 - 4.5, ch. 4 Problem Solving, 10.3, 10.6, <b>RM game directory:</b> Appendix D1 – D23  <b>Suggested Website:</b> National Library of Virtual Manipulatives  <b>Building Blocks computer activities:</b> Reptile Ruler, Workin’ on the Railroad,
Number of feet	Number of Inches									
1	12									
2	24									
3	36									

**x = Meets the standard**

Majority of Students demonstrate thorough understanding of the basic concepts and skills.

**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**MID-MARCH to LATE APRIL**

**DOMAIN: MEASUREMENT and DATA**

**Unit 11: Measurement and Data - continued**

*Cluster Heading: Measure and estimate lengths in standard units*

<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>
<b>2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.</b> <i>(Estimating must always be done after numerous experiences with measuring. If not, it is only guessing!)</i>		<b>RM lessons:</b> 4.1 – 4.5, 10.4 – 10.5, ch.10 Problem Solving p. 385-386, 10.10.6 – 10. 7, <b>RM game directory:</b> Appendix D1 – D23
<ul style="list-style-type: none"> <li>• Make reasonable estimates of measurement after numerous experiences with measurement activities.</li> </ul>		
<b>2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.</b>		<b>RM lessons:</b> 10.2 -10.6 <b>RM game directory:</b> Appendix D1 – D23  <b>Suggested manipulatives:</b> rulers, scales, balances, volume containers (quart, cup, pint, liter, etc.), and other appropriate manipulatives
<ul style="list-style-type: none"> <li>• Compare and contrast two or more objects to determine: Length (Which is longer, shorter?)</li> </ul>		
<ul style="list-style-type: none"> <li>• Measure and compare common objects using metric and English units of length measurement, e.g., centimeter, and inch.</li> </ul>		
<i>Cluster Heading: Relate addition and subtraction to length</i>		
<b>2.MD.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.</b>		<b>RM lesson:</b> 10.2,10.3, Ch. 10 Thinking Story – Ferdie’s Meterstick
<ul style="list-style-type: none"> <li>• Apply knowledge of the addition 2 two-digit numbers to problems involving lengths.</li> </ul>		
<ul style="list-style-type: none"> <li>• Write and solve addition and subtraction problems within 100 using different problem types recording the unknown number with a symbol. (See Gr. 2 Appendix – table 1)</li> </ul>		
<b>2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.</b>		<b>RM lesson:</b> 9.1, Ch. 9 Cumulative Review  <b>Building Blocks computer activities: Rocket Blast 3</b>
<ul style="list-style-type: none"> <li>• Locate whole numbers on a number line diagram</li> </ul>		
<ul style="list-style-type: none"> <li>• Demonstrate and record addition and subtraction sums and differences within 100 on a number line.</li> </ul>		

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**Grade 2**  
**New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015**

**LATE APRIL to MID-MAY**

**DOMAIN: NUMBER and OPERATIONS in BASE TEN**

<b>Unit 12: Money</b>		
<i>Cluster Heading: Work with time and money.</i>		
<b>STANDARDS:</b>	<b>M</b>	<b>Teaching Resources:</b>
<b>2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels and pennies, using \$ and ¢ symbols appropriately. Example: If you have two dimes and three pennies, how many cents do you have?</b>		<b>RM lessons:</b> 1.5, Thinking Story ch.6, 9.9, ch. 9 Chapter Review
<ul style="list-style-type: none"> <li>• Identify the value of U.S coins, and bills. Find the value of a collection of coins and dollar bills and different ways to represent an amount of money up to \$5.</li> </ul>		<b>RM game directory:</b> Appendix D1 – D23
<ul style="list-style-type: none"> <li>• Count change to one dollar or less and then five dollars and less.</li> </ul>		<b>Suggested manipulatives:</b> coins, bills, and other appropriate manipulatives  <b>Suggested Website:</b> National Library of Virtual Manipulatives
<ul style="list-style-type: none"> <li>• Make change for one dollar or less and then five dollars and less.</li> </ul>		
<ul style="list-style-type: none"> <li>• Read amounts of money to one dollar or less and then five dollars and less.</li> </ul>		
<ul style="list-style-type: none"> <li>• Write amounts of money to one dollar or less and then five dollars and less, using appropriate notation, e.g. 69¢, \$0.69.</li> </ul>		
<ul style="list-style-type: none"> <li>• Show different combinations of coins that equal the same amount of money, one dollar or less and then five dollars and less.</li> </ul>		
<ul style="list-style-type: none"> <li>• Use mental math strategies to add and subtract with money.</li> </ul>		
<ul style="list-style-type: none"> <li>• Describe functions related to trading, including coin trades and measurement trades, e.g., five pennies make one nickel or four cups make one quart.</li> </ul>		
<ul style="list-style-type: none"> <li>• Use pennies, nickels, dimes, quarters, and half dollars to do coin trading.</li> </ul>		
<ul style="list-style-type: none"> <li>• Use base ten materials and money (\$1, dimes, and pennies, or \$1, \$10, and \$100 dollar bills) to solve problems involving addition and subtraction of money.</li> </ul>		
<ul style="list-style-type: none"> <li>• Add and subtract with money using appropriate money notations.</li> </ul>		
<ul style="list-style-type: none"> <li>• Apply 2.NBT.5, 2.NBT.6, and 2.NBT.7 to solve money problems and calculate value of coins.</li> </ul>		

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September 2014

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## Grade 2

### New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015

MID-MAY to EARLY JUNE

#### DOMAIN: GEOMETRY AND OPERATIONS AND ALGEBRAIC THINKING

Unit 13: Repeated Addition and Subtraction (Models for Multiplication and Division)		
<i>Cluster Heading: Work with equal groups of objects to gain foundations for multiplication</i>		
<p><b>Please note:</b> At this time the focus is on establishing the groundwork for multiplication by introducing repeated addition and equal groups and division as repeated subtraction. The focus is on the operations of addition and subtraction and groupings because multiplication will be a major focus in grade 3.</p>		
	<b>M</b>	
<b>Teaching Resources/Strategies</b>		
<p><b>2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2's; write an equation to express an even number as a sum of two equal addends.</b></p> <ul style="list-style-type: none"> <li>• Skip count by 2's</li> <li>• Given an even number, write the even number as a sum of two equal addends  <math>16 = 8 + 8</math>     or   <math>14 = 7 + 7</math>     or   <math>50 = 25 + 25</math></li> </ul>	<p><b>RM lessons:</b> 11.1 – 11.4, Ch. 11 Problem Solving p. 437-438, Ch. 11 Practice,  <b>RM game directory:</b> Appendix D1 – D23</p> <p><b>Suggested manipulatives:</b> base ten materials, cubes, counters, color tiles, links, and other appropriate manipulatives</p> <p><b>Building Blocks computer activities:</b> Clean the Plates, Comic Book Shop, Arrays in Area</p>	
<p><b>2.OA.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.</b></p> <ul style="list-style-type: none"> <li>• Relate repeated addition to skip counting by two's, five's and ten's.</li> <li>• Understand that an array is a model of repeated addition that can be used to model multiplication.</li> <li>• Use manipulatives to model arrays showing equal rows and columns</li> <li>• Understand situations that entail equal groupings of objects and sharing equally.</li> <li>• Given an array, write a number sentence to show the repeated addition  <math display="block">\begin{array}{cccc} X &amp; X &amp; X &amp; X \\ X &amp; X &amp; X &amp; X \\ X &amp; X &amp; X &amp; X \end{array} \qquad 4 + 4 + 4 = 12</math></li> </ul>		
<p><b>2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</b></p> <ul style="list-style-type: none"> <li>• Understand that an array is a model of repeated addition that can be used to model multiplication.</li> <li>• Use manipulatives to model arrays showing equal rows and columns</li> </ul>		
<p><b>RM lesson:</b> 11.4</p>		

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## Grade 2

### New Bedford Public Schools - Mathematics Curriculum Map for 2014-2015

EARLY JUNE to END of SCHOOL

<b>Review and Extend Grade 2 Curriculum</b>	
<b>Extend Repeated Addition to Multiplication:</b>	<b>RM lessons:</b> 11.5 -11.6, Ch. 11 Problem Solving
<b>Tell and write time to the minute</b>	<b>RM lessons:</b> 10.9, 10.10, Ch. 10 Problem Solving
<b>Addition and Subtraction Patterns</b>	<b>RM lessons:</b> 12.1 – 12.4
<b>Column Addition</b>	<b>RM lessons:</b> 12.5
<b>Thinking Stories</b>	<b>RM lessons:</b> In each unit
<b>Explore Game activities or Building Block activities</b>	<b>RM game directory:</b> Appendix D1 – D23 <i>Building Blocks</i> computer program
<b>Learn about metric units</b>	<b>RM lessons:</b> 10.4
<b>Learn about customary units</b>	<b>RM lessons:</b> 10.5

JUNE

<b><u>FINAL ASSESSMENTS</u></b>
<b>Basic Fact Fluency Assessment</b>
<b>Final District Math Benchmark Assessment</b>

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# **GRADE 2 MATH CURRICULUM MAP**

## **APPENDIX**

**FROM MA. MATH 2011 CURRICULUM:**

- **TABLE 1**
- **ONLINE RESOURCE LIST**

**TABLE 1.** Common addition and subtraction situations.<sup>1</sup>

	<b>Result Unknown</b>	<b>Change Unknown</b>	<b>Start Unknown</b>
<b>Add to</b>	Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? $2 + 3 = ?$	Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? $2 + ? = 5$	Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? $? + 3 = 5$
<b>Take from</b>	Five apples were on the table. I ate two apples. How many apples are on the table now? $5 - 2 = ?$	Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? $5 - ? = 3$	Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? $? - 2 = 3$
	<b>Total Unknown</b>	<b>Addend Unknown</b>	<b>Both Addends Unknown<sup>2</sup></b>
<b>Put Together/ Take Apart<sup>3</sup></b>	Three red apples and two green apples are on the table. How many apples are on the table? $3 + 2 = ?$	Five apples are on the table. Three are red and the rest are green. How many apples are green? $3 + ? = 5, 5 - 3 = ?$	Grandma has five flowers. How many can she put in her red vase and how many in her blue vase? $5 = 0 + 5, 5 = 5 + 0$ $5 = 1 + 4, 5 = 4 + 1$ $5 = 2 + 3, 5 = 3 + 2$
	<b>Difference Unknown</b>	<b>Bigger Unknown</b>	<b>Smaller Unknown</b>
<b>Compare<sup>4</sup></b>	(“How many more?” version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy?  (“How many fewer?” version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? $2 + ? = 5, 5 - 2 = ?$	(Version with “more”): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have?  (Version with “fewer”): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? $2 + 3 = ?, 3 + 2 = ?$	(Version with “more”): Julie has three more apples than Lucy. Julie has five apples. How many apples does Lucy have?  (Version with “fewer”): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? $5 - 3 = ?, ? + 3 = 5$

<sup>1</sup> Adapted from Box 2-4 of Mathematics Learning in Early Childhood, National Research Council (2009, pp. 32, 33).

<sup>2</sup> These *take apart* situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean *makes* or *results in* but always does mean *is the same number as*.

<sup>3</sup> Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation especially for small numbers less than or equal to 10.

<sup>4</sup> For the Bigger Unknown or Smaller Unknown situations, one version directs the correct operation (the version using *more* for the bigger unknown and using *less* for the smaller unknown). The other versions are more difficult.

## **Math Online Resources for K-5** –

Below is a listing of some websites that provide valuable resources to support math instruction. The list is only a partial list of the many online resources for teachers now becoming available. Additional links to websites are also included in grade level maps. Please add others as you find appropriate.

Website	Description
<a href="http://www.doe.mass.edu/frameworks/math/0311.pdf">http://www.doe.mass.edu/frameworks/math/0311.pdf</a>	Massachusetts 2011 Mathematics Curriculum Frameworks, which incorporate the Common Core State Standards for content and the standards of mathematical practice.
<a href="http://www.doe.mass.edu/candi/model/files.html">http://www.doe.mass.edu/candi/model/files.html</a>	Model Curriculum Units for ELA and Math developed by teachers and administrators in Massachusetts as examples of instructional units aligned to our standards and the Common Core State Standards. Units include unit plans, standards-based lesson plans, assessments, student handouts, etc.
<a href="http://www.parcconline.org/samples/item-task-prototypes">www.parcconline.org/samples/item-task-prototypes</a> click on a grade and content area listed on the left	PARCC's sample items - The Partnership for Assessment of Readiness for College and Careers (PARCC) has released a new set of sample test items in English language arts/literacy and mathematics. These sample items will help schools prepare their students for the new PARCC assessments. With this new set, PARCC now has posted over 70 sample items on its website in grades 3–11 in both subjects.
<a href="http://www.wida.us">www.wida.us</a>	WIDA standards for ELL students include specific standards for content areas such as math. This website has a downloadable library of helpful resources and information for teachers.
<a href="http://katm.org/wp/?page_id=91">http://katm.org/wp/?page_id=91</a>	Grade level “flip books” with suggestions for integration of Standards for Math Practice for each standard, explanation of the content standard, instructional strategy recommendations, student misconceptions to address, etc. Developed with NC, Ohio, and Arizona departments of education.
<a href="http://www.k-5mathteachingresources.com/">http://www.k-5mathteachingresources.com/</a>	This site provides an extensive collection of free resources, math games, and hands-on math activities aligned with the Common Core State Standards for Mathematics. Math printables are suitable for use in math centers, small group or whole class settings.
<a href="http://nlvm.use.edu">http://nlvm.use.edu</a>	National Library of Virtual Manipulatives provides grade level appropriate learning activities for most major math concepts in our standards. The activities are easy to follow and can provide support for teaching a concept, practice, assessment, or for homework help. Students can access the site from home as well.
<a href="https://www.teachingchannel.org/">https://www.teachingchannel.org/</a>	You will need to register for this site but there is no cost. The Teaching Channel videos are very helpful to teachers, parents, and administrators and there are many classroom examples that highlight the Common Core standards for content and math practice.
<a href="http://illuminations.nctm.org/">http://illuminations.nctm.org/</a>	This website has grade level resources for lessons, online activities, etc. that are standards-based. The website has been developed by the National Council for Teachers of Mathematics - NCTM
<a href="http://www.mathsolutions.com">www.mathsolutions.com</a>	Marilyn Burns Associates provides lesson plans and instructional resources for teachers aligned to the common core.