

**Mathematics**  
**Grade 2**  
**CURRICULUM GUIDE**  
**Approved**  
**August 22, 2017**

**Mr. David C. Mango, Superintendent**  
**Mrs. Debra Grigoletti, Director of Curriculum & Instruction**

**Developed by:**  
**Kathleen Fulse**  
**Laurie Weingarten**

**This curriculum may be modified through varying techniques,  
strategies and materials, as per an individual student's  
Individualized Education Plan (IEP).**

**Approved by the Great Meadows Regional Board of Education**  
**At the regular meeting held on August 22, 2017**  
**And**  
***Aligned with the New Jersey Student Learning Standards***

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### **Philosophy and Rationale**

Preparing students to be able to be active participants in our global community and mastering mathematical concepts that may have many applications is crucial to the success and growth of individuals. At the second-grade level, students are challenged to build and utilize problem solving and critical thinking skills that are readily applied to real world situations. Students will develop this skill set by drawing on their knowledge of basic operations, manipulation of data and information the number sense foundation necessary for continued mathematical instruction. In the Great Meadows Regional School District, we seek to create a vital community of learners. We believe that a solid foundation in counting, number recognition, adding, subtracting, shape recognition, mathematical language, and problem solving will help students learn more complex mathematical concepts in their continued education. Students explore numbers, counting, shapes, data collection, and mathematical language through engaging activities. Through self-reflection, collaboration with peers, teacher conferences, and assessments, students discover themselves as effective mathematicians through a multitude of shared learning experiences in a supportive and positive learning environment.

### **Scope and Sequence**

This curriculum is divided into four units which span the entire school year (180 days). The units are grouped based on academic standards. Unit 1 covers Number Sense, and Place Value, which should be approximately 33 instructional and assessment days, Unit 2 covers Addition and Subtraction, which should be approximately 83 instructional and assessment days, Unit 3 covers Measurement and Data, which should be approximately 53 instructional and assessment days and Unit 4 covers Geometry and Fractions, which should be approximately 12 instructional and assessment days. Each of the four focuses on a specific content area, however there is scaffolding that links each unit.

### **Mission Statement**

The Great Meadows Regional School District will provide quality educational opportunities that ensure the individual success of all students within a safe and supportive environment and to build lifelong learners who will meet society’s challenges into and beyond the 21<sup>st</sup> century. To that end, it is anticipated that all students will achieve the New Jersey Student Learning Standards at all grade levels.

<b>Stage 1: Desired Results</b>	
<b>Topic: Unit 1- Critical Area-</b> Numbers Sense and Operations	
<b>Timeline:</b> approximately 33 days inclusive of introduction and assessment.	
<b>Core Content Standards:</b>	
<b>Mathematics: Work with equal groups of objects to gain foundations for multiplication.</b>	
<ul style="list-style-type: none"> <li>• <b>2.OA.3:</b> 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.</li> </ul>	
<b>Mathematics: Understand Place Value</b>	
<ul style="list-style-type: none"> <li>• <b>2.NBT.1:</b> 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:                             <ul style="list-style-type: none"> <li>○ <b>2.NBT.1a:</b> 100 can be thought of as a bundle of ten tens-called a “hundred”</li> <li>○ <b>2.NBT.1b:</b> 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 refer to 0 tens and 0 ones)</li> </ul> </li> <li>• <b>2.NBT.2:</b> Count within 1000, skip-count by 5s, 10s, and 100s.</li> <li>• <b>2.NBT.3:</b> Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.</li> <li>• <b>2.NBT.4:</b> Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</li> </ul>	
<b>Mathematics: Use place value understanding and properties of operations to add and subtract.</b>	
<ul style="list-style-type: none"> <li>• <b>2.NBT.8:</b> Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.</li> </ul>	
<b>Essential Questions:</b>	<b>Enduring Understanding:</b>
<ul style="list-style-type: none"> <li>• How do you use place value to find the values of numbers and describe numbers in different</li> </ul>	Attributes are measurable. <ul style="list-style-type: none"> <li>• Numbers can represent quantity, position, location, and</li> </ul>

<p>ways?</p> <ul style="list-style-type: none"> <li>• How can you use place value to model, write and compare 3-digit numbers?</li> </ul>	<p>relationships.</p> <ul style="list-style-type: none"> <li>• Patterns and relationships can be represented numerically, graphically, symbolically, and verbally.</li> <li>• The value of a digit is determined by its position within the number.</li> </ul>
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**Knowledge and Skills: (SWBAT embedded course proficiencies)**

With prompting and support, students will be able to:

- Solve problems by finding different combinations of tens and ones to represent 2-digit numbers using the strategy *find a pattern*.
- Extend counting sequences within 1,000, counting by 1s, 5s, 10s, and 100s.
- Extend number patterns by counting on by tens or hundreds.
- Solve problems involving number comparisons by using the strategy make a model.
- Compare 3-digit numbers using the  $>$ ,  $=$ , and  $<$  symbols
- Understand that each group of 10 tens is equivalent to 1 hundred.
- Write 3-digit numbers that are represented by groups of tens.
- Apply place value and use concrete/pictorial models to represent 3-digit numbers.
- Use place value to describe the values of digits in numbers to 1,000.
- Read and write 3-digit numbers in word & expanded form, and standard form.
- Apply place value concepts to find equivalent representations of numbers.
- Identify 10 more, 10 less, 100 more, or 100 less than a given number.

**Stage 2:**

**Evidence of Understanding, Learning Objectives and Expectations**

**Benchmarks: (embedded student proficiencies)**

Students will show evidence of understanding by completing Go Math! Workbook activities and assessments or utilize the Personal Math Trainer from chapters 1 and 2.

**Assessment Methods: (formative, summative, other evidence and/or student self-assessment)**

- Problem of the Day
- Show What You Know
- Mid-Chapter Checkpoint
- Chapter Review/Test
- Chapter Performance Task
- Critical Area Performance Task
- Math Journal

- Digital Personal Math Trainer
- Teacher observation of student work completion
- Reteach and Enrichment activities (differentiation)
- Class discussions
- Interactive games
- Math centers with recording sheets

<b>Stage 3: Learning Plan</b>	
<p><b>Evidence of Engaging Students</b></p> <p>Students will be engaged through:</p> <ul style="list-style-type: none"> <li>• large and small group discussion</li> <li>• allowing students to revise, rethink, and refine their understanding of topics covered.</li> </ul>	<p><b>Evidence of Differentiated Instruction</b></p> <p>Differentiation will be provided through:</p> <ul style="list-style-type: none"> <li>• written, visual, auditory, and hands-on activities to meet all learning styles.</li> <li>• Students will be provided with individualized instruction as needed.</li> <li>• Introduction of new vocabulary will help students express their ideas, opinions, and feelings.</li> </ul>
<p><b>Integration of 21<sup>st</sup> Century Skills</b></p> <ul style="list-style-type: none"> <li>• In this Unit, second graders will practice the 21<sup>st</sup> Century Skills of Communication and Collaboration</li> </ul>	<p><b>Integration of 21<sup>st</sup> Century Learning</b></p> <ul style="list-style-type: none"> <li>• We also focus on many Life and Career Skills by supporting students' interactions with peers and teachers throughout their school day.</li> </ul>

**Resources:**

Go Math provides many resources that include:

Digital:

- Personal Math Trainer
- Math on the Spot Video
- Animated Math Models
- iTools
- HMH Mega Math Interactive SmartBoard activities

Print:

- Student Edition Go Math workbook
- Practice and Homework
- Reteach (in the Chapter Resources)
- Enrich (in the Chapter Resources)
- Grab-and-Go™ Centers Kit

Additional Resources:

- Teacher created SmartBoard activities
- Educational songs
- Video clips from [www.youtube.com](http://www.youtube.com),
- Brain POP Jr.
- Manipulatives (such as counters, base-ten blocks, dice, etc.)
- Games, (both Go Math and teacher-made)
- School website links to educational games

<b>Stage 1: Desired Results</b>	
<b>Topic: Unit 2-Critical Area-</b> Addition and Subtraction	
<b>Timeline:</b> 83 instructional days including introduction and assessment	
<b>Core Content Standards:</b>	
<b>Mathematics: Represent and solve problems involving addition and subtraction</b>	
<ul style="list-style-type: none"> <li>• <b>2.OA.1:</b> 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.</li> </ul>	
<b>Mathematics: Add and subtract within 20.</b>	
<ul style="list-style-type: none"> <li>• <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. Work with equal groups of objects to gain foundations for multiplication.</li> <li>• <b>2.OA.4:</b> 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.</li> </ul>	
<b>Mathematics: Use place value understanding and properties of operations to add and subtract.</b>	
<ul style="list-style-type: none"> <li>• <b>2.NBT.5:</b> Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.</li> <li>• <b>2.NBT.6:</b> Add up to four two-digit numbers using strategies based on place value and properties of operations.</li> <li>• <b>2.NBT.7:</b> 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.</li> <li>• <b>2.NBT.9:</b> Explain why addition and subtraction strategies work, using place value and the properties of operations</li> </ul>	
<b>Essential Questions:</b>	<b>Enduring Understanding:</b>
<ul style="list-style-type: none"> <li>• How can you use patterns and strategies to find sums and differences for basic facts?</li> <li>• How do you use place value to add 2-digit numbers, and what are different ways you can add 2-digit numbers?</li> </ul>	<p>Attributes are measurable.</p> <ul style="list-style-type: none"> <li>• Addition and subtraction are useful to solve real world problems.</li> <li>• Strategies based on place value and properties of operations can be used to add multi-digit whole numbers.</li> </ul>

<ul style="list-style-type: none"><li>• How do you use place value to subtract 2-digit numbers with and without grouping?</li><li>• What are some of the strategies for adding and subtracting 3-digit numbers?</li></ul>	<ul style="list-style-type: none"><li>• Computation involves breaking apart and combining numbers using a variety of approaches.</li><li>• Numbers can be represented in multiple ways</li><li>• Model two-digit addition or subtraction with regrouping</li><li>• Draw quick pictures and record two-digit addition or subtraction using the standard algorithm</li><li>• Represent addition and subtraction situations with number sentences using a symbol for the unknown number</li></ul>
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**Knowledge and Skills: (SWBAT embedded course proficiencies)**

With prompting and support, students will be able to:

- Use doubles facts as a strategy for finding sums for near doubles facts.
- Recall sums for basic facts using properties and strategies.
- Recall sums for addition facts using the make a ten strategy.
- Find sums of three addends by applying the Commutative and Associative Properties of Addition.
- Use the inverse relationship of addition and subtraction to recall basic facts.
- Recall differences for basic facts using mental strategies.
- Find differences on a number line to develop the mental strategy of decomposing to simplify facts.
- Use models and equations to represent and solve a variety of addition and subtraction situations.
- Solve problems involving equal groups by using the strategy act it out.
- Write equations using repeated addition to find the total number of objects in arrays.
- Find a sum by breaking apart 1-digit addend to make 2-digit addend a multiple of 10.
- Use compensation to develop flexible thinking for 2-digit addition.
- Apply place-value concepts when using break-apart strategy for 2-digit addition.
- Record 2-digit addition using the standard algorithm.
- Practice 2-digit addition with and without regrouping.
- Rewrite horizontal addition problems vertically in the standard algorithm format.
- Break apart a 1 or 2-digit number to subtract it from a 2-digit number.
- Solve problems involving 2-digit addition using the strategy *draw a diagram*.
- Draw quick pictures and record 2-digit subtraction using the standard algorithm.
- Practice and record 2-digit subtraction with and without regrouping.

- Rewrite horizontal subtraction problems vertically in the standard algorithm format.
- Solve problems involving 2-digit subtraction by using the strategy draw a diagram.
- Represent subtraction situations with number sentences using a symbol for the unknown number.
- Analyze word problems to determine what operations to use to solve multistep problems.
- Draw quick pictures and record 2 or 3-digit addition using the standard algorithm.
- Apply place value concepts when using a break apart strategy for 3-digit addition
- Solve problems involving 3-digit subtraction by using the strategy make a model.
- Record 3-digit subtraction using the standard algorithm with possible regrouping of hundreds, tens, and/or ones
- Record subtraction using the standard algorithm when there are zeros in the minuend.

### **Stage 2:**

#### **Evidence of Understanding, Learning Objectives and Expectations**

##### **Benchmarks: (embedded student proficiencies)**

Students will show evidence of understanding by describing attributes of objects and events. With guidance and support, students will represent and interpret data.

##### **Assessment Methods: (formative, summative, other evidence and/or student self-assessment)**

- Problem of the Day
- Show What You Know
- Mid-Chapter Checkpoint
- Chapter Review/Test
- Chapter Performance Task
- Critical Area Performance Task
- Math Journal
- Digital Personal Math Trainer
- Teacher observation of student work completion
- Reteach and Enrichment activities (differentiation)
- Class discussions
- Interactive games
- Math centers with recording sheets

<b>Stage 3: Learning Plan</b>	
<p><b>Evidence of Engaging Students</b></p> <p>Students will be engaged through:</p> <ul style="list-style-type: none"> <li>• large and small group discussion</li> <li>• allowing students to revise, rethink, and refine their understanding of topics covered.</li> </ul>	<p><b>Evidence of Differentiated Instruction</b></p> <p>Differentiation will be provided through:</p> <ul style="list-style-type: none"> <li>• written, visual, auditory, and hands-on activities to meet all learning styles.</li> <li>• Students will be provided with individualized instruction as needed.</li> <li>• Introduction of new vocabulary will help students express their ideas, opinions, and feelings.</li> </ul>
<p><b>Integration of 21<sup>st</sup> Century Skills</b></p> <ul style="list-style-type: none"> <li>• In this Unit, second graders will practice the 21<sup>st</sup> Century Skills of Communication and Collaboration</li> </ul>	<p><b>Integration of 21<sup>st</sup> Century Learning</b></p> <ul style="list-style-type: none"> <li>• We also focus on many Life and Career Skills by supporting students' interactions with peers and teachers throughout their school day.</li> </ul>
<p><b>Resources:</b></p> <p>Go Math provides many resources that include:</p> <p>Digital:</p> <ul style="list-style-type: none"> <li>• Personal Math Trainer</li> <li>• Math on the Spot Video</li> <li>• Animated Math Models</li> <li>• iTools</li> <li>• HMH Mega Math Interactive SmartBoard activities</li> </ul> <p>Print:</p> <ul style="list-style-type: none"> <li>• Student Edition Go Math workbook</li> <li>• Practice and Homework</li> <li>• Reteach (in the Chapter Resources)</li> <li>• Enrich (in the Chapter Resources)</li> <li>• Grab-and-Go™ Centers Kit</li> </ul> <p>Additional Resources:</p> <ul style="list-style-type: none"> <li>• Teacher created SmartBoard activities</li> <li>• Educational songs</li> </ul>	

- Video clips from [www.youtube.com](http://www.youtube.com),
- Brain POP Jr.
- Manipulatives (such as counters, base-ten blocks, dice, etc.)
- Games, (both Go Math and teacher-made)
- School website links to educational games.

**Stage 1:  
Desired Results**

**Topic: Unit 3- Critical Area-** Measurement and Data

**Timeline:**

53 instructional days including introduction and assessment

**Core Content Standards:**

**Mathematics: Measure and estimate lengths in standard units**

- **2.MD.1:** Measure the length of an object by selecting & using appropriate tools such as rulers, yardsticks, meter sticks & measuring tapes.
- **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.
- **2.MD.3:** Estimate lengths using units of inches, feet, centimeters & meters.
- **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.

**Mathematics: Relate addition and subtraction to length.**

- **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.
- **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, ... & represent whole-number sums & differences within 100 on a number line diagram. 1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations  $8 + ? = 11$ ,  $5 = ? - 6$ ,  $6 + 6 = ?$

**Mathematics: Work with time and money.**

- **2.MD.7:** Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- **2.MD.8:** Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

**Mathematics: Represent and interpret data**

- **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

<p>scale is marked off in whole-number units.</p> <ul style="list-style-type: none"> <li>● <b>2.MD.10:</b> 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.</li> </ul>	
<p><b>Essential Questions:</b></p> <ul style="list-style-type: none"> <li>● How do you use the values of coins and bills to find the total value of a group of money, and how do you read times shown on analog and digital clocks?</li> <li>● What are some of the methods and tools that can be used to estimate and measure length?</li> <li>● What are some of the methods and tools that can be used to estimate and measure length in metric units?</li> <li>● How do tally charts, picture graphs, and bar graphs help you solve problems?</li> </ul>	<p><b>Enduring Understanding:</b></p> <p>Attributes are measurable.</p> <ul style="list-style-type: none"> <li>● The length of objects is measurable in different units.</li> <li>● Measurements need the same unit of measure in order to be compared.</li> <li>● Time can be given in more than one way.</li> <li>● Using various clocks in different settings, time is measured in minutes and hours.</li> <li>● Through identification of coins, and assigning values to those coins, groups of coins can be counted.</li> <li>● Data can be organized in different ways.</li> <li>● Each type of graph is most appropriate for certain types of data</li> </ul>
<p><b>Knowledge and Skills: (SWBAT embedded course proficiencies)</b></p> <p>With prompting and support, students will be able to:</p> <ul style="list-style-type: none"> <li>● Find the total values of collections of quarters, dimes, nickels, and pennies.</li> <li>● Order coins in a collection by value and then find the total value.</li> <li>● Represent money amounts less than a dollar using two different combinations of coins.</li> <li>● Show one dollar in a variety of ways.</li> <li>● Find and record the total value for money amounts greater than \$1.</li> <li>● Solve word problems involving money by using the strategy act it out.</li> <li>● Tell and write time to the hour and half hour.</li> <li>● Tell and write time to the nearest five minutes.</li> <li>● Tell and write time using A.M. and P.M.</li> <li>● Use concrete models to measure the lengths of objects in inches.</li> <li>● Estimate the lengths of objects by mentally partitioning the lengths into inches.</li> <li>● Measure the lengths of objects to the nearest inch using an inch ruler.</li> <li>● Solve addition and subtraction problems involving the lengths of objects by using the strategy draw a diagram</li> <li>● Measure the lengths of objects in both inches and feet to explore the inverse</li> </ul>	

- relationship between size and number of units.
- Estimate the lengths of objects in feet, centimeters, meters.
  - Select appropriate tool for measuring different lengths. (inch, centimeter, meter ruler)
  - Measure the lengths of objects and use a line plot to display the measurement data.
  - Use a concrete model to measure the lengths of objects in centimeters
  - Measure the lengths of objects in both centimeters and meters to explore the inverse relationship between size and number of units.
  - Measure and then find the difference in the lengths of two objects
  - Collect data in a survey and record that data in a tally chart.
  - Interpret data in picture or bar graphs and use that information to solve problems.

<b>Stage 2:</b>	
<b>Evidence of Understanding, Learning Objectives and Expectations</b>	
<b>Benchmarks: (embedded student proficiencies)</b>	
Students will demonstrate their understanding by using language to describe similarities, differences and attributes of shapes. They will compose simple shapes to form new shapes. They will identify, create, and sort 2D and 3D shapes. Students will be able to describe the relative position of objects using terms such as above, below, beside, etc.	
<b>Assessment Methods: (formative, summative, other evidence and/or student self-assessment)</b>	
<ul style="list-style-type: none"> <li>• Problem of the Day</li> <li>• Show What You Know</li> <li>• Mid-Chapter Checkpoint</li> <li>• Chapter Review/Test</li> <li>• Chapter Performance Task</li> <li>• Critical Area Performance Task</li> <li>• Math Journal</li> <li>• Digital Personal Math Trainer</li> <li>• Teacher observation of student work completion</li> <li>• Reteach and Enrichment activities (differentiation)</li> <li>• Class discussions</li> <li>• Interactive games</li> <li>• Math centers with recording sheets</li> </ul>	

<b>Stage 3:</b>	
<b>Learning Plan</b>	
<b>Evidence of Engaging Students</b>	<b>Evidence of Differentiated Instruction</b>
Students will be engaged through:	

<ul style="list-style-type: none"> <li>• large and small group discussion</li> <li>• allowing students to revise, rethink, and refine their understanding of topics covered.</li> </ul>	<p>Differentiation will be provided through:</p> <ul style="list-style-type: none"> <li>• written, visual, auditory, and hands-on activities to meet all learning styles.</li> <li>• Students will be provided with individualized instruction as needed.</li> <li>• Introduction of new vocabulary will help students express their ideas, opinions, and feelings.</li> </ul>
<p><b>Integration of 21<sup>st</sup> Century Skills</b></p> <ul style="list-style-type: none"> <li>• In this Unit, second graders will practice the 21<sup>st</sup> Century Skills of Communication and Collaboration</li> </ul>	<p><b>Integration of 21<sup>st</sup> Century Learning</b></p> <ul style="list-style-type: none"> <li>• We also focus on many Life and Career Skills by supporting students' interactions with peers and teachers throughout their school day.</li> </ul>
<p><b>Resources:</b>          Go Math provides many resources that include:          Digital:</p> <ul style="list-style-type: none"> <li>• Personal Math Trainer</li> <li>• Math on the Spot Video</li> <li>• Animated Math Models</li> <li>• iTools</li> <li>• HMH Mega Math Interactive SmartBoard activities</li> </ul> <p>Print:</p> <ul style="list-style-type: none"> <li>• Student Edition Go Math workbook</li> <li>• Practice and Homework</li> <li>• Reteach (in the Chapter Resources)</li> <li>• Enrich (in the Chapter Resources)</li> <li>• Grab-and-Go™ Centers Kit</li> </ul> <p>Additional Resources:</p> <ul style="list-style-type: none"> <li>• Teacher created SmartBoard activities</li> <li>• Educational songs</li> <li>• Video clips from <a href="http://www.youtube.com">www.youtube.com</a>,</li> <li>• Brain POP Jr.</li> <li>• Manipulatives (such as counters, base-ten blocks, dice, etc.)</li> <li>• Games, (both Go Math and teacher-made)</li> <li>• School website links to educational games.</li> </ul>	

<p><b>Stage 1: Desired Results</b></p>	
<p><b>Topic: Unit 4- Critical Area-</b> Geometry and Fractions</p>	
<p><b>Timeline:</b></p> <ul style="list-style-type: none"> <li>• 12 instructional days including introduction and assessment</li> </ul>	
<p><b>Core Content Standards:</b>  <b>Mathematics: Reason with shapes and their attributes</b></p> <ul style="list-style-type: none"> <li>• <b>2.G.1:</b> Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.</li> <li>• <b>2.G.2:</b> Partition a rectangle into rows and columns of same size squares and count to find the total number of them.</li> <li>• <b>2.G.3:</b> Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, 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.</li> </ul>	
<p style="text-align: center;"><b>Essential Questions:</b></p> <ul style="list-style-type: none"> <li>• What are some two-dimensional shapes and three-dimensional shapes, and how can you show equal parts of shapes?</li> </ul>	<p style="text-align: center;"><b>Enduring Understanding:</b></p> <p>Attributes are measurable.</p> <ul style="list-style-type: none"> <li>• Students identify and describe three-dimensional shapes according to the number of faces, edges, and vertices.</li> <li>• Name 3-,4-,5-, and 6-sided shapes according to their attributes.</li> <li>• Identify angles in two-dimensional shapes</li> <li>• Partition shapes to show halves, thirds, or fourths</li> <li>• Identify and name equal parts of circles and rectangles as halves, thirds or fourths.</li> </ul>
<p><b>Knowledge and Skills: (SWBAT embedded course proficiencies)</b></p> <p>With prompting and support, students will be able to:</p> <ul style="list-style-type: none"> <li>• Identify and describe three-dimensional shapes according to the number of faces, edges, and vertices.</li> <li>• Build three-dimensional shapes using cubes and other objects.</li> </ul>	

- Name 3-, 4-, 5-, and 6-sided shapes according to the number of sides and vertices.
- Identify angles in two-dimensional shapes.
- Sort two-dimensional shapes according to their attributes.
- Partition rectangles into equal-size squares and find the total number of these squares.
- Identify and name equal parts of circles and rectangles as halves, thirds, or fourths
- Partition shapes to show halves, thirds, or fourths.
- Identify and describe one equal part as a half of, a third of, or a fourth of a whole.
- Solve problems involving wholes divided into equal shares by using the strategy draw a diagram.

<b>Stage 2:</b>	
<b>Evidence of Understanding, Learning Objectives and Expectations</b>	
<b>Benchmarks: (embedded student proficiencies)</b>	
Students will demonstrate their understanding by using language to describe similarities, differences and attributes of shapes. They will compose simple shapes to form new shapes. They will identify, create, and sort 2D and 3D shapes. Students will be able to describe the relative position of objects using terms such as above, below, beside, etc.	
<b>Assessment Methods: (formative, summative, other evidence and/or student self-assessment)</b>	
<ul style="list-style-type: none"> <li>• Problem of the Day</li> <li>• Show What You Know</li> <li>• Mid-Chapter Checkpoint</li> <li>• Chapter Review/Test</li> <li>• Chapter Performance Task</li> <li>• Critical Area Performance Task</li> <li>• Math Journal</li> <li>• Digital Personal Math Trainer</li> <li>• Teacher observation of student work completion</li> <li>• Reteach and Enrichment activities (differentiation)</li> <li>• Class discussions</li> <li>• Interactive games</li> <li>• Math centers with recording sheets</li> </ul>	

<b>Stage 3:</b>	
<b>Learning Plan</b>	
<b>Evidence of Engaging Students</b> Students will be engaged through: <ul style="list-style-type: none"> <li>• large and small group discussion</li> </ul>	<b>Evidence of Differentiated Instruction</b> Differentiation will be provided through:

<ul style="list-style-type: none"> <li>• allowing students to revise, rethink, and refine their understanding of topics covered.</li> </ul>	<ul style="list-style-type: none"> <li>• written, visual, auditory, and hands-on activities to meet all learning styles.</li> <li>• Students will be provided with individualized instruction as needed.</li> <li>• Introduction of new vocabulary will help students express their ideas, opinions, and feelings.</li> </ul>
<p><b>Integration of 21<sup>st</sup> Century Skills</b></p> <ul style="list-style-type: none"> <li>• In this Unit, second graders will practice the 21<sup>st</sup> Century Skills of Communication and Collaboration</li> </ul>	<p><b>Integration of 21<sup>st</sup> Century Learning</b></p> <ul style="list-style-type: none"> <li>• We also focus on many Life and Career Skills by supporting students' interactions with peers and teachers throughout their school day.</li> </ul>
<p><b>Resources:</b>          Go Math provides many resources that include:          Digital:</p> <ul style="list-style-type: none"> <li>• Personal Math Trainer</li> <li>• Math on the Spot Video</li> <li>• Animated Math Models</li> <li>• iTools</li> <li>• HMH Mega Math Interactive SmartBoard activities</li> </ul> <p>Print:</p> <ul style="list-style-type: none"> <li>• Student Edition Go Math workbook</li> <li>• Practice and Homework</li> <li>• Reteach (in the Chapter Resources)</li> <li>• Enrich (in the Chapter Resources)</li> <li>• Grab-and-Go™ Centers Kit</li> </ul> <p>Additional Resources:</p> <ul style="list-style-type: none"> <li>• Teacher created SmartBoard activities</li> <li>• Educational songs</li> <li>• Video clips from <a href="http://www.youtube.com">www.youtube.com</a>,</li> <li>• Brain POP Jr.</li> <li>• Manipulatives (such as counters, base-ten blocks, dice, etc.)</li> <li>• Games, (both Go Math and teacher-made)</li> <li>• School website links to educational games.</li> </ul>	

<http://www.state.nj.us/education/cccs/>

### **Integration of 21<sup>st</sup> Century Theme(s)**

The following websites are sources for the following 21<sup>st</sup> Century Themes and Skills:

<http://www.nj.gov/education/code/current/title6a/chap8.pdf>

<http://www.p21.org/about-us/p21-framework> .

<http://www.state.nj.us/education/cccs/standards/9/index.html>

### **21st Century Interdisciplinary Themes (into core subjects)**

- **Global Awareness**
- **Financial, Economic, Business and Entrepreneurial Literacy**
- **Civic Literacy**
- **Health Literacy**
- **Environmental Literacy**

### **Learning and Innovation Skills**

- **Creativity and Innovation**
- **Critical Thinking and Problem Solving**
- **Communication and Collaboration**

### **Information, Media and Technology Skills**

- **Information Literacy**
- **Media Literacy**
- **ICT (Information, Communications and Technology) Literacy**

### **Life and Career Skills**

- **Flexibility and Adaptability**
- **Initiative and Self-Direction**
- **Social and Cross-Cultural Skills**

- **Productivity and Accountability**
- **Leadership and Responsibility**

**Integration of Digital Tools**

- **Classroom computers/laptops**
- **Technology Lab**
- **FM system**
- **Other software programs**