



# Township of Ocean Schools

Assistant Superintendent  
Office of Teaching and Learning

## **SPARTAN MISSION:**

*Meeting the needs of all students with a proud tradition of academic excellence.*

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## **Curriculum Documents**

**School:** All Elementaries

**Course:** Math – Grade 1

**Department:** Math

**Supervisor:** Christine Picerno

Board Approval	Supervisor	Notes
August 2006	Jessica Shaw	Update Standards
November 2011	Christine Picerno	Update Standards
December 2017	Christine Picerno	Update Standards

*Home of the Spartans!*  
*#spartanlegacy*



## **Philosophy of Mathematics Education Township of Ocean Schools**

To function effectively as citizens and consumers, all students need to learn to enjoy and appreciate the value of mathematics and develop the mathematical skills they must have for varied educational and career options. Strong foundations in number sense and numerical operations form a basis for the successful use of mathematics.

Students best acquire mathematics skills when they are engaged in activities that enable them to discover, understand, and apply mathematical concepts. When students are challenged to use mathematics in meaningful ways, they develop their reasoning and problem-solving skills and come to realize the usefulness of mathematics in their lives.

Students preparing for careers in the information-based economy of the twenty-first century must be able to solve real problems, reason effectively, and make logical connections. To enable all students to gain the necessary mathematical skills, understandings and attitudes, instruction needs to focus on the whys and hows of mathematical learning which are as follows:

1. Pose and solve real world problems.
2. Effectively communicate mathematical ideas.
3. Make connections within mathematics and between mathematics and other areas.
4. Provide opportunities for active student involvement.
5. Use of technology.

When math is taught in a problem-solving spirit, students are interested in what they are doing and are more likely to understand the material. Instructional strategies that allow students to talk and write about math helps to clarify and solidify their thinking and develop confidence in themselves as mathematical thinkers.

Mathematics learning is not dependent on special abilities but can be achieved by all students: by using organizational strategies such grouping, cooperative learning, individualized and whole class instruction; by differentiating instructional strategies; and by developing achievable high-level expectations.

Students will develop positive attitudes toward mathematics when they are taught in a supportive, developmentally appropriate environment, when all students' mathematical learning embodies the notion that engagement in mathematics is essential and that where decision-making, risk-taking, perseverance, self-assessment, and self-confidence are frequently keys to success.

<b>1.OA Operations and Algebraic Thinking</b>		Grade 1
<b>Cluster:</b> Represent and solve problems involving addition and subtraction.		
<b>Essential Questions</b>	<b>Enduring Understandings</b>	
How do we find the missing number in a math sentence?	We can find missing numbers in a math sentence/equation or word problem using addition and subtraction.	
<b>Standards</b>	<b>Classroom Applications</b>	
<p>1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</p> <p>(NJSLS 1.OA.1)</p>	<p><b><u>Instructional Guidance</u></b>  <i>To assist in meeting this standard, students may:</i></p> <ul style="list-style-type: none"> <li>• Listen to, read, comprehend and solve word problems with numbers up to 20</li> <li>• Combine up to three sets of objects in the classroom (chairs, children, fingers, floor tiles, etc.) to find the total (of up to 20)</li> <li>• Use manipulatives, drawings, sounds, and mental images to add and subtract, and solve word problems within 20</li> <li>• Use number lines, calendar, 100 chart, and manipulatives to add or subtract by counting on or counting back</li> <li>• Tell and write number stories to illustrate and solve number problems using verbal explanations, expressions, and equations within 20</li> <li>• Show two or more ways to create the same total up to 20 with two addends using objects or drawings, and record the equations</li> <li>• Use objects or drawings to find the addend that will make up to 20 when added to given number, and record the answer with a drawing or equation</li> <li>• Practice (both orally and in writing) facts for addition and subtraction within 20</li> <li>• Use fact families and/or fact triangles to practice facts for addition and subtraction within 20</li> <li>• Read, write, and solve equations using symbol to represent the unknown number</li> </ul> <p><b><u>Measures of Understanding</u></b>  <i>To show evidence of meeting this standard, students will:</i></p> <ul style="list-style-type: none"> <li>• by the end of the year, solve for the missing number in addition and subtraction sentences/equations</li> <li>• by the end of the year, solve addition and subtraction word problems, and add and subtract within 20, by using objects or drawings to represent the problem</li> <li>• by the end of the year, solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem</li> </ul> <p><b><u>Resources</u></b></p> <p>Illustrations: Learn those facts  <a href="http://illuminations.nctm.org/LessonDetail.aspx?ID=U58">http://illuminations.nctm.org/LessonDetail.aspx?ID=U58</a></p> <p>NationalLibraryofVirtualManipulatives:Algebra,GradesPre-K-2  <a href="http://nlvm.usu.edu/en/nav/grade_g_1.html">http://nlvm.usu.edu/en/nav/grade_g_1.html</a></p>	
<p>2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</p> <p>(NJSLS 1.OA.2)</p>		

**Suggested Formative Assessments**

- Quick Checks
- Quizzes
- Lesson Assessments
- District Wide Formative Assessments (3)

**Suggested Summative Assessments:**

- Program Benchmarks
- Unit Assessments
- District Wide Summative Assessments

<b>1.OA Operations and Algebraic Thinking</b>	Grade 1
<b>Cluster:</b> Understand and apply properties of operations and the relationship between addition and subtraction.	
<b>Essential Questions</b>	<b>Enduring Understandings</b>
How are addition and subtraction related? How does understanding that addition and subtraction are related help us to solve math problems?	Understanding how addition and subtraction are related helps us to solve math problems.
<b>Standards</b>	<b>Classroom Applications</b>
<p>3. Apply properties of operations as strategies to add and subtract. <i>[Students need not use formal terms for these properties.]</i>  <i>Examples: if <math>8 + 3 = 11</math> is known, then <math>3 + 8 = 11</math> is also known. (Commutative property of addition.) To add <math>2 + 6 + 4</math>, the second two numbers can be added to make a ten, so <math>2 + 6 + 4 = 2 + 10 = 12</math>. (Associative property of addition.)</i></p> <p>(NJSLS 1.OA.3)</p>	<p><b><u>Instructional Guidance</u></b>  <b><i>To assist in meeting this standard, students may:</i></b></p> <ul style="list-style-type: none"> <li>• Use manipulatives, drawings, and number lines to show that regardless of the order in which two groups of objects are added, the total is the same</li> <li>• Use manipulatives, drawings and number lines to show that regardless of the order in which three groups of objects are added, the total is the same</li> <li>• Add three or more numbers by first adding a pair of numbers that equal 10 (when such a pair exists) as the most efficient strategy</li> <li>• Show two or more ways to create the same total up to 20, using the two or more addends, using objects or drawings, and record the equations</li> <li>• Use fact families and/or fact triangles to practice facts for addition and subtraction within 20 to understand subtraction as an unknown-addend problem</li> </ul>
<p>4. Understand subtraction as an unknown-addend problem. <i>For example, subtract <math>10 - 8</math> by finding the number that makes 10 when added to 8.</i></p> <p>(NJSLS 1.OA.4)</p>	<p><b><u>Measures of Understanding</u></b>  <b><i>To show evidence of meeting this standard, students will:</i></b></p> <ul style="list-style-type: none"> <li>• by the end of the year, solve subtraction problems by adding</li> <li>• by the end of or more numbers by first adding a pair of numbers that equal 10 (when such a pair exists)</li> </ul> <p><b><u>Resources</u></b>          Illuminations: Learn those facts  <a href="http://illuminations.nctm.org/LessonDetail.aspx?ID=U58">http://illuminations.nctm.org/LessonDetail.aspx?ID=U58</a>          National Library of Virtual Manipulatives: Algebra, Grades Pre-K-2  <a href="http://nlvm.usu.edu/en/nav/grade_g_1.html">http://nlvm.usu.edu/en/nav/grade_g_1.html</a></p> <p><b><u>Suggested Formative Assessments</u></b></p> <ul style="list-style-type: none"> <li>• Quick Checks</li> <li>• Quizzes</li> <li>• Lesson Assessments</li> <li>• District Wide Formative Assessments (3)</li> </ul> <p><b><u>Suggested Summative Assessments:</u></b></p> <ul style="list-style-type: none"> <li>• Program Benchmarks</li> <li>• Unit Assessments</li> <li>• District Wide Summative Assessments</li> </ul>

1.OA Operations and Algebraic Thinking		Grade 1
<b>Cluster:</b> Add and subtract within 20.		
Essential Questions	Enduring Understandings	
What strategies do we use to figure out how much or how many we have?	Adding or subtracting changes how many or how much of something we have. Using our number sense and strategies will help us solve addition and subtraction problems.	
Standards	Classroom Applications	
<p>5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p> <p>(NJSLS 1.OA.5)</p>	<p><b><u>Instructional Guidance</u></b>  <i>To assist in meeting this standard, students may:</i></p> <ul style="list-style-type: none"> <li>Count up or down from start to end number</li> <li>Build or decompose tens</li> <li>Decompose larger numbers into simpler terms (e.g., 8 becomes 5 and 3 or 4 and 4)</li> <li>Use manipulatives to model the building and decomposing of tens</li> <li>Use number lines to count forward and backward</li> </ul>	
<p>6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., <math>8 + 6 = 8 + 2 + 4 = 10 + 4 = 14</math>); decomposing a number leading to a ten (e.g., <math>13 - 4 = 13 - 3 - 1 = 10 - 1 = 9</math>); using the relationship between addition and subtraction (e.g., knowing that <math>8 + 4 = 12</math>, one knows <math>12 - 8 = 4</math>); and creating equivalent but easier or known sums (e.g., adding <math>6 + 7</math> by creating the known equivalent <math>6 + 6 + 1 = 12 + 1 = 13</math>).</p> <p>(NJSLS 1.OA.6)</p>	<p><b><u>Measures of Understanding</u></b>  <i>To show evidence of meeting this standard, students will:</i></p> <ul style="list-style-type: none"> <li>by the end of the year, be able to add and subtract within 20 by using all of the following strategies: <ul style="list-style-type: none"> <li>Counting up or down</li> <li>Breaking out 10 and adding or subtracting remainders</li> <li>Simplifying larger numbers into multiple, smaller numbers</li> </ul> </li> </ul> <p><b><u>Resources</u></b></p> <p><a href="http://www.mathsisfun.com/numbers/addition.html">http://www.mathsisfun.com/numbers/addition.html</a></p> <p><a href="http://www.aaastudy.com/add26ax1.htm">http://www.aaastudy.com/add26ax1.htm</a></p> <p><a href="http://mathplayground.com/flashcards_01.html">http://mathplayground.com/flashcards_01.html</a></p> <p><b><u>Suggested Formative Assessments</u></b></p> <ul style="list-style-type: none"> <li>Quick Checks</li> <li>Quizzes</li> <li>Lesson Assessments</li> <li>District Wide Formative Assessments (3)</li> </ul> <p><b><u>Suggested Summative Assessments:</u></b></p> <ul style="list-style-type: none"> <li>Program Benchmarks</li> <li>Unit Assessments</li> <li>District Wide Summative Assessments</li> </ul>	

1.OA Operations and Algebraic Thinking		Grade 1
<b>Cluster:</b> Work with addition and subtraction equations.		
Essential Questions	Enduring Understandings	
How can different sets of numbers be equal?	Equations allow us to write mathematical sentences. True equations have the same value on both sides. False equations have different values on both sides.	
Standards	Classroom Applications	
<p>7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <i>For example, which of the following equations are true and which are false?</i></p> <p style="padding-left: 20px;"> <math>6 = 6</math>  <math>7 - 8 = 1</math>  <math>5 + 2 = 2 + 5</math>  <math>4 + 1 = 5 + 2</math> </p> <p>(NJSLS 1.OA.7)</p>	<p><b><u>Instructional Guidance</u></b></p> <p><i>To assist in meeting this standard, students may:</i></p> <ul style="list-style-type: none"> <li>• Use a balance to demonstrate equality (e.g. see-saw)</li> <li>• Model equivalency through manipulatives</li> <li>• Categorize equations as true or false</li> <li>• Apply prior knowledge of addition and subtraction rules to identify an unknown number (e.g., counting, making 10, modeling)</li> <li>• Apply the basic concepts of inverse operations</li> <li>• (e.g., <math>5 + ? = 9</math> can be rewritten as <math>9 - 5 = ?</math>)</li> <li>• Interpret the equal sign to mean "the same as", for example, <math>4 + 3 = 5 + 2</math>, is interpreted as "4 + 3 is the same as 5 + 2"</li> </ul> <p><b><u>Measures of Understanding</u></b></p> <p><i>To show evidence of meeting this standard, students will:</i></p> <ul style="list-style-type: none"> <li>• Be able to distinguish between equal and not equal</li> <li>• Be able to create an equation with operations on each side of the equal sign.</li> <li>• Be able to "fill in the blank" to an equation such as <math>5 + ? = 7</math></li> <li>• by the end of the year, be able to complete an equation with expressions on both side of the equal sign</li> </ul> <p><b><u>Resources</u></b></p> <p><a href="http://www.aaastudy.com/add.htm">http://www.aaastudy.com/add.htm</a></p> <p><a href="http://www.mathsisfun.com/algebra/introduction.html">http://www.mathsisfun.com/algebra/introduction.html</a></p> <p><a href="http://mathplayground.com/AlgebraEquations.html">http://mathplayground.com/AlgebraEquations.html</a></p> <p><b><u>Suggested Formative Assessments</u></b></p> <ul style="list-style-type: none"> <li>• Quick Checks</li> <li>• Quizzes</li> <li>• Lesson Assessments</li> <li>• District Wide Formative Assessments (3)</li> </ul> <p><b><u>Suggested Summative Assessments:</u></b></p> <ul style="list-style-type: none"> <li>• Program Benchmarks</li> <li>• Unit Assessments</li> <li>• District Wide Summative Assessments</li> </ul>	
<p>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:</p> <p style="padding-left: 20px;"> <math>8 + ? = 11</math>  <math>5 = ? - 3</math> </p> <p>(NJSLS 1.OA.8)</p>		

<b>1. NBT Number and Operations in Base Ten</b>		Grade 1
<b>Cluster:</b> Extend counting sequence.		
<b>Essential Questions</b>	<b>Enduring Understandings</b>	
Starting at any number, how can we use the pattern of counting to recite numbers up to 120?	We recognize the sequential pattern when reading, writing and counting numbers.	
<b>Standards</b>	<b>Classroom Applications</b>	
<p>1. Count to 120, starting at any number less than 120; in this range, read and write numerals and represent a number of objects with a written numeral.</p> <p>(NJSLS 1.NBT.1)</p>	<p><b><u>Instructional Guidance</u></b>  <i>To assist in meeting this standard, students may:</i></p> <ul style="list-style-type: none"> <li>• Group a collection of up to 120 objects into tens and ones</li> <li>• Chant number sequences forward beginning at any number</li> <li>• Write the corresponding numeral to develop an understanding of place value</li> <li>• Use the number grid chart to see the position of numbers relative to each other</li> <li>• Count from 0 to 120 and write the corresponding numerals</li> </ul> <p><b><u>Measures of Understanding</u></b>  <i>To show evidence of meeting this standard, students will:</i></p> <ul style="list-style-type: none"> <li>• by the end of the year, students will orally count on from any given number within the 0-120 range.</li> <li>• by the end of the year, students will be able to read and write numbers from the 0-120 range</li> </ul> <p><b><u>Resources</u></b></p> <p><a href="http://mrsgebauer.com/mathsites.html">http://mrsgebauer.com/mathsites.html</a></p> <p><b><u>Suggested Formative Assessments</u></b></p> <ul style="list-style-type: none"> <li>• Quick Checks</li> <li>• Quizzes</li> <li>• Lesson Assessments</li> <li>• District Wide Formative Assessments (3)</li> </ul> <p><b><u>Suggested Summative Assessments:</u></b></p> <ul style="list-style-type: none"> <li>• Program Benchmarks</li> <li>• Unit Assessments</li> <li>• District Wide Summative Assessments</li> </ul>	



1. NBT Number and Operations in Base Ten		Grade 1
<b>Cluster:</b> Understand place value.		
Essential Questions	Enduring Understandings	
Why do we break numbers apart by tens and ones?	We organize numbers by tens and ones to help us count and compare numbers	
Standards	Classroom Applications	
<p>2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:</p> <p>(NJSLS 1.NBT.2)</p> <p>a. 10 can be thought of as a bundle often ones – called a "ten."</p> <p>(NJSLS 1.NBT.2a)</p> <p>b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</p> <p>(NJSLS 1.NBT.2b)</p> <p>c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).</p> <p>(NJSLS 1.NBT.2c)</p>	<p><b><u>Instructional Guidance</u></b></p> <p><i>To assist in meeting this standard, students may:</i></p> <ul style="list-style-type: none"> <li>• Group unifix cubes into sets of tens and ones</li> <li>• Match unifix cubes to corresponding numbers (11-19)—making sure they represent the "sets of tens" and the ones</li> <li>• Count by tens while matching the set of "tens" to the corresponding number—i.e. 30 = 3 sets of tens</li> <li>• Use manipulatives to compare sets of objects as greater than, less than, or equal to</li> <li>• Explain which of two two-digit numbers is <i>greater than, less than, or equal to</i> using hundreds chart, number line, place value mats, base ten blocks, number cards, unifix cubes, ten-frames</li> <li>• Write math sentences representing the relationship of the numbers from the activity above using the symbols greater than, less than, or equal to (&gt;,&lt;=)</li> </ul> <p><b><u>Measures of Understanding</u></b></p> <p><i>To show evidence of meeting this standard, students will:</i></p> <ul style="list-style-type: none"> <li>• by the end of the year, students will identify the number of tens and ones in any two digit number</li> <li>• by the end of the year, students will compare two two-digit numbers using the terms and symbols for greater than, less than, or equal to (&gt;,&lt;=)</li> <li>• by the end of the year, students will be able to compare number values of the same digit in different places (6 has a different value in 64 and 56)</li> </ul> <p><b><u>Resources</u></b></p> <p><a href="http://mrsgebauer.com/mathsites.html">http://mrsgebauer.com/mathsites.html</a></p> <p><a href="http://www.mathwire.com/numbersense/placevalue.html">http://www.mathwire.com/numbersense/placevalue.html</a></p> <p><a href="http://www.mathwire.com/numbersense/morepv.html">http://www.mathwire.com/numbersense/morepv.html</a></p> <p><b><u>Suggested Formative Assessments</u></b></p> <ul style="list-style-type: none"> <li>• Quick Checks</li> <li>• Quizzes</li> <li>• Lesson Assessments</li> </ul>	
<p>3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols &gt;, =, and &lt;.</p> <p>(NJSLS 1.NBT.3)</p>		

- District Wide Formative Assessments (3)

**Suggested Summative Assessments:**

- Program Benchmarks
- Unit Assessments
- District Wide Summative Assessments

1. NBT Number and Operations in Base Ten		Grade 1
<b>Cluster:</b> Use place value understanding and properties of operations to add and subtract.		
Essential Questions	Enduring Understandings	
How does the position of a digit in a number affect the value of the number?	Place value is based on groups of ten. Our number system is organized in groups of tens to help us add and subtract numbers.	
Standards	Classroom Applications	
<p>4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to written method and explain the reasoning used. Understand that in addition two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</p> <p>(NJSLS 1.NBT.4)</p>	<p><b><u>Instructional Guidance</u></b>  <i>To assist in meeting this standard, students may:</i></p> <ul style="list-style-type: none"> <li>• Use unifix cubes to add a two-digit number to a one-digit number and record the number sentence and new number</li> <li>• Use unifix cubes to show subtraction of numbers with multiples often (i.e. 90-20, 70-30). Show the relationship of these numbers using manipulatives and pictures and then match it with numbers</li> <li>• Using pictures or manipulatives, show the addition of a two-digit number and a one-digit number. Write or explain the thinking behind the work</li> <li>• Use the number grid to add or subtract ten to any given number</li> <li>• Orally express ten more or ten less than a given two-digit number</li> <li>• Continue to count forward and backward by ones from any given number to develop fluency of numbers</li> <li>• Continue to count forward by twos, fives, and tens to develop fluency of numbers</li> </ul>	
<p>5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.</p> <p>(NJSLS 1.NBT.5)</p>	<p><b><u>Measures of Understanding</u></b>  <i>To show evidence of meeting this standard, students will:</i></p> <ul style="list-style-type: none"> <li>• by the end of the year, students will add two-digit by one-digit numbers using concrete/pictorial models</li> <li>• by the end of the year, students will explain how they add on to any given two-digit number by ten</li> <li>• By the end of the year, students will subtract multiples often from any two-digit number using concrete/pictorial models</li> </ul>	
<p>6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to written method and explain the reasoning used.</p> <p>(NJSLS 1.NBT.6)</p>	<p><b><u>Resources</u></b></p> <p><a href="http://mrsgebauer.com/mathsites.html">http://mrsgebauer.com/mathsites.html</a></p> <p><a href="http://www.mathwire.com/numbersense/placevalue.html">http://www.mathwire.com/numbersense/placevalue.html</a></p> <p><a href="http://www.mathwire.com/numbersense/morepv.html">http://www.mathwire.com/numbersense/morepv.html</a></p> <p><b><u>Suggested Formative Assessments</u></b></p> <ul style="list-style-type: none"> <li>• Quick Checks</li> <li>• Quizzes</li> <li>• Lesson Assessments</li> <li>• District Wide Formative Assessments (3)</li> </ul> <p><b><u>Suggested Summative Assessments:</u></b></p>	

- |  |   |
|--|---|
|  | <ul style="list-style-type: none"><li>• Program Benchmarks</li><li>• Unit Assessments</li><li>• District Wide Summative Assessments</li></ul> |
|--|---|

<b>1. MD Measurement and Data</b>		Grade 1
<b>Cluster:</b> Measure lengths indirectly and by iterating length units.		
<b>Essential Questions</b>		<b>Enduring Understandings</b>
How do we measure objects? How do we compare objects by length?		We can use objects as units to measure lengths of things.
<b>Standards</b>		<b>Classroom Applications</b>
<p>1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.</p> <p>(NJSLS 1.MD.1)</p> <p>2. Express the length of an object as awhile number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i></p> <p>(NJSLS 1.MD.2)</p>		<p><b><u>Instructional Guidance</u></b></p> <p><i>To assist in meeting this standard, students may:</i></p> <ul style="list-style-type: none"> <li>• Measure length of tape on the floor with three different non-standard units of measure, i.e., craft sticks, color tiles, baby steps (template of a baby's foot), basketball step (template of a basketball player's foot)</li> <li>• Measure an object drawn on paper using color tiles</li> <li>• Place three objects of different lengths in order of size and compare the lengths of two of the objects by using the third object. For example, the bluestick is longer than the pencil but shorter than the string of yarn.</li> </ul> <p><b><u>Measures of Understanding</u></b></p> <p><i>To show evidence of meeting this standard, students will</i></p> <ul style="list-style-type: none"> <li>• by the end of the year, students will accurately measure and compare the lengths of objects using non-standard units of measure</li> <li>• by the end of the year, students will measure the length of an object by starting at the beginning and measuring to the end, in a straight line, while placing units without gaps or overlaps and counting the units correctly</li> </ul> <p><b><u>Resources</u></b></p> <p><a href="http://kids.aol.com/KOL/2/HomeworkHelp/Archive/homework-help-jr-measurement">http://kids.aol.com/KOL/2/HomeworkHelp/Archive/homework-help-jr-measurement</a></p> <p><a href="http://pbskids.org/clifford/games/measuring_up.html">http://pbskids.org/clifford/games/measuring_up.html</a></p> <p><a href="http://www.zoodles.com/free-online-kids-games/first-1st-grade">http://www.zoodles.com/free-online-kids-games/first-1st-grade</a></p> <p><b><u>Suggested Formative Assessments</u></b></p> <ul style="list-style-type: none"> <li>• Quick Checks</li> <li>• Quizzes</li> <li>• Lesson Assessments</li> <li>• District Wide Formative Assessments (3)</li> </ul> <p><b><u>Suggested Summative Assessments:</u></b></p> <ul style="list-style-type: none"> <li>• Program Benchmarks</li> <li>• Unit Assessments</li> <li>• District Wide Summative Assessments</li> </ul>

<b>1.MD Measurement and Data</b>		Grade 1
<b>Cluster:</b> Tell and write time.		
<b>Essential Questions</b>	<b>Enduring Understandings</b>	
How does the digital clock represent time? How does the clock face represent time?	There are sixty minutes in an hour. An analog clock has a short hand to represent hours and a longer hand to represent minutes. On a digital clock, the number to the left of the colon represents the hour, and the number on the right of the colon represents the minutes after the hour.	
<b>Standards</b>	<b>Classroom Applications</b>	
Tell and write time in hours and half-hours using analog and digital clocks.  (NJSLS 1.MD.3)	<p><b><u>Instructional Guidance</u></b>  <i>To assist in meeting this standard, students may:</i></p> <ul style="list-style-type: none"> <li>• Connect lines to match a digital clock and an analog clock that show the same time (to the hour or half hour)</li> <li>• Represent a time on an analog clock (to the hour or half hour).</li> <li>• Given a time on an analog clock write the time as it would be represented on a digital clock (to the hour or half hour)</li> </ul> <p><b><u>Measures of Understanding</u></b>  <i>To show evidence of meeting this standard, students will:</i></p> <ul style="list-style-type: none"> <li>• by the end of the school year, students will be able to identify the hour hand and the minute hand on a clock and tell time to the hour</li> <li>• by the end of the school year, students will be able to tell and write time to the hour and half hour on a digital and on an analog clock</li> </ul> <p><b><u>Resources</u></b></p> <p><a href="http://kids.aol.com/KOL/2/HomeworkHelp/Archive/homework-help-ir-measurement">http://kids.aol.com/KOL/2/HomeworkHelp/Archive/homework-help-ir-measurement</a></p> <p><a href="http://www.zoodles.com/free-online-kids-games/first-1st-grade">http://www.zoodles.com/free-online-kids-games/first-1st-grade</a></p> <p><b><u>Suggested Formative Assessments</u></b></p> <ul style="list-style-type: none"> <li>• Quick Checks</li> <li>• Quizzes</li> <li>• Lesson Assessments</li> <li>• District Wide Formative Assessments (3)</li> </ul> <p><b><u>Suggested Summative Assessments:</u></b></p> <ul style="list-style-type: none"> <li>• Program Benchmarks</li> <li>• Unit Assessments</li> <li>• District Wide Summative Assessments</li> </ul>	

<b>1.MD Measurement and Data</b>		Grade 1
<b>Cluster:</b> Represent and interpret data.		
<b>Essential Questions</b>	<b>Enduring Understandings</b>	
How do we make sense out of data?	We use data to compare how two or more groups are similar or different. By organizing and sorting data, we can describe and compare the numbers in a group.	
<b>Standards</b>	<b>Classroom Applications</b>	
4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.  (NJSLS 1.MD.4)	<p><b><u>Instructional Guidance</u></b>  <i>To assist in meeting this standard, students may:</i></p> <ul style="list-style-type: none"> <li>Given a dataset, figure out ways to understand and represent the data</li> <li>Respond to a survey question and figure out ways to represent the data with tally marks, cubes, drawings, or other materials</li> <li>Develop their own survey questions and make a plan for gathering the data. They collect and record classmates' responses to their surveys.</li> </ul> <p><b><u>Measures of Understanding</u></b>  <i>To show evidence of meeting this standard, students will:</i></p> <ul style="list-style-type: none"> <li>by the end of the year students will be able to analyze data by answering questions about the data, such as, "How many more are in one category than another, which category has the most and/or the least"</li> <li>by the end of the year, given a set a data students will be able to organize and represent the data</li> </ul> <p><b><u>Resources</u></b></p> <p><a href="http://www.zoodles.com/free-online-kids-games/kindergarten_probability--statistics?source=nav_subjects">http://www.zoodles.com/free-online-kids-games/kindergarten_probability--statistics?source=nav_subjects</a><a href="http://nces.ed.gov/nceskids/createagraph/">http://nces.ed.gov/nceskids/createagraph/</a></p> <p><a href="http://kids.aol.com/KOL/2/HomeworkHelp/Archive/homework-help-jr-math-graphs">http://kids.aol.com/KOL/2/HomeworkHelp/Archive/homework-help-jr-math-graphs</a></p> <p><b><u>Suggested Formative Assessments</u></b></p> <ul style="list-style-type: none"> <li>Quick Checks</li> <li>Quizzes</li> <li>Lesson Assessments</li> <li>District Wide Formative Assessments (3)</li> </ul> <p><b><u>Suggested Summative Assessments:</u></b></p> <ul style="list-style-type: none"> <li>Program Benchmarks</li> <li>Unit Assessments</li> </ul>	

- District Wide Summative Assessments

<b>1.G Geometry</b>		Grade 1
<b>Cluster:</b> Reason with shapes and their attributes.		
<b>Essential Questions</b>	<b>Enduring Understandings</b>	
Where are geometric shapes found in everyday objects?	Identifying the properties of shapes can help sort them. By breaking apart large shapes we can make new shapes and name them as halves, fourths/quarters.	
<b>Standards</b>	<b>Classroom Applications</b>	
<p>1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.</p> <p>(NJSLS 1.G.1)</p>	<p><b><u>Instructional Guidance</u></b>  <i>To assist in meeting this standard, students may:</i></p> <ul style="list-style-type: none"> <li>• Use models of plane shapes to compare them to everyday objects</li> <li>• Use attributes of shapes to sort them</li> <li>• Identify shapes in a piece of art</li> <li>• Use pattern blocks to combine shapes to make a new shape</li> <li>• Use pattern blocks to identify how shapes can be broken apart to make smaller shapes and described by halves and fourths/quarters</li> </ul> <p><b><u>Measures of Understanding</u></b>  <i>To show evidence of meeting this standard, students will:</i></p> <ul style="list-style-type: none"> <li>• By the end of the year, students will be able to explain the similarities and differences in geometric shapes (plane and solids)</li> <li>• By the end of the year, students will be able to identify fractional parts of a shape divided into halves and fourths/quarters</li> <li>• By the end of the year, divide a circle or rectangle into fractional parts and use mathematical language to describe the action (halves, quarters, fourths)</li> <li>• By the end of the year, demonstrate with manipulatives that the more parts a shape is broken into, the smaller the parts will be</li> </ul> <p><b><u>Resources</u></b>  <i>Shape of Me and Other Stuff</i> by Dr. Seuss  <a href="http://www.mathplayground.com/geoboard.html">http://www.mathplayground.com/geoboard.html</a><a href="http://www.mathcats.com/explore/polygonplayground.html">http://www.mathcats.com/explore/polygonplayground.html</a></p>	
<p>2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. <i>[Students do not need to learn formal names such as "right rectangular prism."]</i></p> <p>(NJSLS 1.G.2)</p>		
<p>3. Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. Describe the whole as <i>two of</i>, or <i>four of</i> the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.</p> <p>(NJSLS 1.G.3)</p>	<p><b><u>Suggested Formative Assessments</u></b></p> <ul style="list-style-type: none"> <li>• Quick Checks</li> <li>• Quizzes</li> <li>• Lesson Assessments</li> <li>• District Wide Formative Assessments (3)</li> </ul> <p><b><u>Suggested Summative Assessments:</u></b></p>	