

Big Idea	NUMBER PROPERTIES AND OPERATIONS			
Academic Expectations	<p><b>2.7</b> Students understand number concepts and use numbers appropriately and accurately.</p> <p><b>2.8</b> Students understand various mathematical procedures and use them appropriately and accurately.</p>			
POS Understandings	<p><b>MA-P-NPO-U-1</b> Students will understand that numbers, ways of representing numbers, relationships between numbers and number systems are means of representing real-world quantities.</p>	<p><b>9 Weeks Taught</b></p>	<p>1 <b>2</b> <b>3</b> 4</p>	
POS Skills & Concepts	Date(s) Taught	Core Content for Assessment	Objective	Essential Vocabulary
<p><b>MA-P-NPO-S-NS1</b> Students will read, write, count and model whole numbers 0-10,000, developing an understanding of place value for ones, tens, hundreds, thousands and ten thousands.</p> <p><b>MA-P-NPO-S-NS2</b> Students will apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to describe and compare whole numbers and fractions (e.g., halves, thirds, fourths) in mathematical and real-world problems.</p> <p><b>MA-P-NPO-S-NS3</b> Students will order groups of objects according to quantity.</p> <p><b>MA-P-NPO-S-PNO1</b> Students will explore, develop and use the concepts of multiples.</p> <p><b>MA-P-NPO-S-PNO2</b> Students will skip-count forwards and backwards by 2s, 5s, 10s and 100s, using manipulatives, mental math and written and electronic means to communicate understanding.</p>		<p><b>MA-EP-1.1.1 <u>Second nine weeks</u></b> Students will:  <ul style="list-style-type: none"> <li>• apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to describe whole numbers (0 to 9,999):</li> <li>• apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, symbols) to describe fractions (halves, thirds, fourths);</li> <li>• apply these numbers to represent real-world problems and</li> <li>• explain how the base 10 number system relates to place value.</li> </ul> <p style="text-align: right;"><b>DOK 2</b></p> <p><b>MA-EP-1.1.2 <u>Second nine weeks</u></b> Students will read, write and rename whole numbers (0 to 9,999) and apply to real-world and mathematical problems.</p> <p><b>MA-EP-1.1.3 <u>Second nine weeks</u></b> Students will compare (&lt;, &gt;, =) and order whole numbers to whole numbers, decimals to decimals (as money only) and fractions to fractions (limited to pictorial representations)</p> <p style="text-align: right;"><b>DOK 2</b></p> </p>	<p>I can describe fractions (halves, thirds, fourths).</p> <p>I can use place value (Base 10 blocks, number lines, symbols) to order, compare, and describe whole numbers to 9.999</p> <p>I can read, write, and rename whole numbers to 9.999.</p> <p>I can apply whole numbers to real world situations.</p> <p>I can compare money amounts.</p> <p>I can order and compare pictures of fractions.</p>	<p>Halves Thirds Fourths Fractions Whole numbers Place value</p> <p>Base 10</p> <p>Compare Order &lt;, &gt;, =</p>

<p><b>MA-P-NPO-S-PNO3</b> Students will explore, develop and use the concepts of odd and even numbers.</p> <p><b>MA-P-NPO-S-PNO4</b> Students will explore and use of properties of numbers for written and mental computation (e.g., <math>4 + 7 + 6</math> could be mentally regrouped as <math>4 + 6 + 7</math> using the commutative property of addition).</p>		<p><i>MA-EP-1.3.2</i> <i>Students will skip-count forward and backward by 2s, 5s, 10s and 100s.</i></p> <p><b>MA-EP-1.5.1 <u>Third nine weeks</u></b> <b>Students will identify and provide examples of odd numbers, even numbers and multiples of a number, and will apply these numbers to solve real-world problems.</b> DOK 2</p>	<p>I can count backward from 100 by 5's and 10's.</p> <p>I can identify and give examples of multiples of a number</p> <p>I can use multiples to solve real world problems.</p>	<p>Multiples</p>
<b>Strategies &amp; Activities</b>		<b>Resources</b>	<b>Common Assessments</b>	
		<b>Essential Questions</b>	<b>Higher Order Questions</b>	

POS Understandings	<b>MA-P-NPO-U-2</b> Students will understand that meanings of and relationships among operations provide tools necessary to solve realistic problems encountered in everyday life.		<b>9 Weeks Taught</b>	1 <b>2</b> 3 4			
POS Skills & Concepts	Date(s) Taught	Core Content for Assessment	Objective	Essential Vocabulary			
<p><b>MA-P-NPO-S-NS4</b> Students will order, compare and understand the relative magnitude of numbers from 0-10,000, using the symbols &lt;, &gt;, =, including the use of physical and visual models for smaller numbers.</p> <p><b>MA-P-NPO-S-NS5</b> Students will develop beginning fractional concepts (e.g., dividing an object into equal parts and naming the equal parts [e.g., halves, thirds, fourths]).</p> <p><b>MA-P-NPO-S-NS6</b> Students will expand fraction concepts (e.g., whole to part and part to whole; one-half is larger than one-fourth).</p> <p><b>MA-P-NPO-S-NS7</b> Students will be introduced to and use decimals to represent money.</p> <p><b>MA-P-NPO-S-NO3</b> Students will develop part-whole relations using numbers (e.g., <math>3 + 2 = 5</math>, <math>1 + 4 = 5</math>).</p> <p><b>MA-P-NPO-S-NO4</b> Students will explore and solve two-digit addition and subtraction problems through the use of manipulatives.</p> <p><b>MA-P-NPO-S-NO5</b> Students will explore and develop factor-factor-product (e.g., <math>2 \times 3 = 6</math>) using manipulatives. (e.g., hundreds charts, base-10 blocks, arrays).</p> <p><b>MA-P-NPO-S-NO6</b> Students will multiply whole numbers through <math>10 \times 10</math>.</p>		<p><b>MA-EP-1.3.1 <u>First, second and third 9wks.</u></b>  <b>Students will analyze real-world problems to identify appropriate representations using mathematical operations, and will apply operations to solve real-world problems with the following constraints:</b></p> <ul style="list-style-type: none"> <li>• add and subtract whole numbers with three digits or less;</li> <li>• multiply whole numbers of 10 or less;</li> <li>• add and subtract fractions with like denominators less than or equal to four and</li> <li>• add and subtract decimals related to money.</li> </ul> <p style="text-align: right;"><b>DOK 2</b></p> <p><b>MA-EP-1.3.3 <u>Third nine weeks</u></b>  <i>Students will divide two digit numbers by single digit divisors (with or without remainders) in real-world and mathematical problems.</i></p>	<p>I can add and subtract numbers with up to three digits.</p> <p>I can add and subtract fractions with the same denominators.</p> <p>I can add and subtract decimals related to money.</p> <p>I can use addition and subtraction to solve real world problems.</p> <p>I can multiply whole numbers of 10 or less.</p> <p>I can use multiplication to solve real world problems.</p> <p>I can divide two digit numbers by a 1 digit number.</p> <p>I can use division to solve real world problems.</p>	<p>Addition Subtraction</p> <p>Digits</p> <p>Sum</p> <p>Addend</p> <p>Factors Product</p> <p>Dividend Divisor Quotient</p>			

<p><b>MA-P-NPO-S-NO7</b> Students will relate division facts to multiplication facts (e.g., using factor-factor-product).</p> <p><b>MA-P-NPO-S-NO8</b> Students will solve multi-digit addition and subtraction problems that contain numerals and symbols.</p> <p><b>MA-P-NPO-S-NO9</b> Students will add common fractions with like denominators using manipulatives.</p> <p><b>MA-P-NPO-S-NO10</b> Students will add and subtract decimals using money.</p> <p><b>MA-P-NPO-S-PNO4</b> Students will explore and use of properties of numbers for written and mental computation (e.g., <math>4 + 7 + 6</math> could be mentally regrouped as <math>4 + 6 + 7</math> using the commutative property of addition).</p>		<p><b>MA-EP-1.5.1 <u>Third Nine weeks</u></b> <b>Students will identify and provide examples of odd numbers, even numbers and multiples of a number, and will apply these numbers to solve real-world problems.</b></p> <p><b>DOK 2</b></p> <p><i>MA-EP-1.5.2 <u>Third nine weeks</u></i> <i>Students will use the commutative properties of addition and multiplication, the identity properties of addition and multiplication and the zero property of multiplication in written and mental computation.</i></p>	<p>I can give examples of the commutative property of multiplication.</p> <p>I can give examples of the identity property of multiplication.</p> <p>I can give examples of the identity property of multiplication.</p> <p>I can give examples of the zero property of multiplication.</p>	<p>Zero property of multiplication</p> <p>Commutative Property of multiplication</p> <p>Identity property of multiplication</p>
<b>Strategies &amp; Activities</b>		<b>Resources</b>	<b>Common Assessments</b>	
Number Stars – p. 34 (Math Strategies You Can Count On by Char For				
		<b>Essential Questions</b>	<b>Higher Order Questions</b>	