

## MSAD #54 Math Curriculum

Content Area: Math  
Unit: Number

Grade: Grade K  
MLR Span: PreK-2

### MLR Content Standard: **A: Number**

Students use numbers in everyday and mathematical contexts to quantify or describe phenomena, develop concepts of operations with different types of numbers, use the structure and properties of numbers with operations to solve problems, and perform mathematical computations. Students develop number sense related to magnitude, estimation, and the effects of mathematical operations on different types of numbers. It is expected that students use numbers flexibly, using forms of numbers that best match a situation. Students compute efficiently and accurately. Estimation should always be used when computing with numbers or solving problems.

\*Assessment

Number	MLR Performance Indicators	MSAD #54 Objectives	Instructional Resources/Activities
<b>Whole Number</b>	<p>1. Students understand and use number notation and place value to 1000 in numerals.</p> <p>a. Read and write numbers to 1000 using numerals.</p>	<p>Students will:</p> <p>a1. use objects to represent and count quantities to 30, and recognize and write the numbers that describe quantities to 30.</p> <p>a2. develop counting, reading, and writing numbers 0 through 5 and express the relationship between two groups as more or fewer.</p> <p>a3. develop counting, reading, and writing numbers 6 through 10 and expressing the relationship between two numbers as greater or less.</p>	<p>a1. <u>Scott Foresman</u> Chapters 4 &amp; 5 <u>Navigations</u> Numbers &amp; Operations PK-2 Choose a Number pp.16-18</p> <p>a1. <u>Math Their Way</u> Learning to Write Numbers pp. 42-51</p> <p>a2. <u>Scott Foresman</u> Chapter 4</p> <p>a2. <u>About Teaching Mathematics</u> pp.173-182</p> <p>a3. <u>Scott Foresman</u> Chapter 4</p> <p>a3. <u>Navigations</u> Algebra Pk-2 Follow the Number Roads pp. 19-21</p>

	<p>b. Recognize the place values of digits in numbers (hundreds, tens, and ones).</p> <p>c. Compare and order one-digit, two-digit, and three-digit numbers.</p> <hr/> <p>2. Students understand and use procedures to add and subtract whole numbers with one and two digits.</p> <p>a. Use and explain multiple strategies for computation.</p>	<p>a4. develop representative quantities up to 31 using objects, numerals, and word names.</p> <p>b1. count groups of 10, up to 10 tens and write how many.</p> <p>b2. use objects and ten-frames to represent and count quantities to 30.</p> <p>b3. use benchmarks to estimate the quantities of groups.</p> <p>c1. count and write numbers to 100 on the hundred chart.</p> <p>c2. find, identify, and record numbers through 31 on a calendar.</p> <hr/> <p>Students will:</p> <p>a1. develop a variety of problem solving strategies and reasoning methods.</p> <p>a2. use multiple strategies in solving problems involving addition and subtraction of whole numbers up to 20.</p> <p>a3. explain an answer to a problem using words, numbers, pictures, manipulatives, etc.</p> <p>a4. Develop meaning of addition by acting out stories,</p>	<p>a4. <u>Scott Foresman</u> Chapter 5</p> <p>b1-b3. <u>Scott Foresman</u> Chapter 12 pp.287-288</p> <p>b1-b3. <u>Scott Foresman</u> Chapters 4 &amp; 5</p> <p>b3. <u>Scott Foresman Teachers Edition</u> pp.119A-120</p> <p>c1-c2. <u>Scott Foresman</u> Chapter 3 MTW – Ch 11</p> <hr/> <p>a1-a6. <u>Scott Foresman</u> Chapter 5 pp. 123-124 <u>Navigations</u> Problem Solving &amp; Reasoning Pk-K Line Up pp.20-22</p> <p>a1-b3. <u>Scott Foresman</u> Chapter 12 pp.289-290 <u>Navigations</u> Numbers &amp; Operations Pk-2 Flip 2 pp.65-67</p> <p>a1-b3. <u>Navigations</u> problem Solving &amp; Reasoning Pk-K Bears in the House and in</p>
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	<p>b.Use an operation appropriate to a given situation</p>	<p>drawing and interpreting illustrations, using the plus sign (+), and the equal sign (=) to write and solve addition number sentences.</p> <p>a5.develop the meaning of subtraction by acting out stories, drawing and interpreting illustrations, using the minus sign (-), and the equal sign (=) to write and solve addition number sentences.</p> <p>a6.decompose numbers up to ten into two or more quantities.</p> <p>b1.use mathematical skills and knowledge when reasoning mathematically.</p> <p>b2.make sense of seemingly nonsensical situations or fix vague problems.</p> <p>b3.use real world situations to realize that math makes sense and that answers can be examined using reason and logic.</p>	<p>the Park PP 10.13</p> <p><u>Navigations</u> Algebra Pk-2 Who Jumps Furthest? pp.57-59 Lots of Spots pp36-37</p> <p><u>About Teaching Math</u> Logical Reasoning pp 100-111</p> <p><u>Scott Foresman Problem Strategy</u> Examples: Act out or use objects-pp 185, 186, 217, 218; Draw a picture-pp. 185,186; Use logical reasoning- pp. 19,20; Try, check, revise- pp 143-144; Look for a patterns-pp 35-46, 95-96; Make an organized list- pp. 233-234; Make an table-pp 125-126; Make a graph-pp.31-34, 67-68; Write a number sentence equation- pp. 253-262, 271-278; Problem of the Day Packet</p> <p>a4.<u>Scott Foresman</u> Chapter 10 <u>Navigations</u> Number &amp; Operations Pk-2 Frump’s Fashions pp.41-45 <u>MTW</u> ch. 4, ch.7, ch.8, ch.9</p> <p>a5. <u>Scott Foresman</u> Chapter 4 <u>Navigations</u> Number &amp; Operations Pk-2 Frames pp 46-48</p>
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<p><b>Rational Number</b></p>	<p>3.Students recognize unit fractions including <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, and <math>\frac{1}{3}</math>.</p>	<p>Students will: a3.understand “one-half” to mean one of two equal parts.</p>	<p>a3.Spoken language and visual/concrete models in context.</p>
<p><b>Real Number</b></p>	<p>4.No performance indicator.</p>		

## MSAD #54 Math Curriculum

Content Area: Math  
Unit: Data

Grade: Grade K  
MLR Span: PreK-2

### MLR Content Standard: **B: Data**

Students make measurements and collect, display, evaluate, analyze, and compute with data to describe or model phenomena and to make decisions based on data. Students compute statistics to summarize data sets and use concepts of probability to make predictions and describe the uncertainty inherent in data collection and measurement. It is expected that when working with measurements students: understand that most measurements are approximations and that taking repeated measurements reveals this variability; understand that a number with a unit is not a measurement, and that an appropriate unit must always be attached to a number to provide a measurement; understand that the precision and accuracy of a measurement depends on selecting the appropriate tools and units; and use estimation comparing measures to benchmarks appropriate to the type of measure and units.

\*Assessment

<b>Data</b>	<b>MLR Performance Indicators</b>	<b>MSAD #54 Objectives</b>	<b>Instructional Resources/Activities</b>
<b>Measurement and Approximation</b>	<p>1. Students understand and use units of time, temperature, and money.</p> <p>a. Apply and use sequences of hours in a day, days in a week, and months in a year.</p> <p>b. Tell time to the hour and half hour.</p>	<p>Students will:</p> <p>a1. identify and order the days of the week and name the months and seasons of the year.</p> <p>b1. Identify the time of day as day or night; morning, afternoon, or evening.</p> <p>b2. tell time to the hour on analog and digital clocks.</p> <p>b3. identify the activity or event that takes more or less time.</p>	<p>a1. <u>Scott Foresman</u> Teacher Edition pp. 161A-162, 165A-166 MTW-Summary Newsletter ch. 7</p> <p>b1. <u>Scott Foresman</u> Teacher Edition pp. 171A-172 <u>Navigations</u> Measurement Pk-2 Snake Imprints pp. 37-40</p> <p>b2. <u>Scott Foresman</u> Teacher Edition pp. 173A-176</p> <p>b3. <u>Scott Foresman</u> Teacher Edition pp. 177A-178</p>

	<p>c. Identify and give the value of different coins.</p> <p>d. Find the total value of collections of coins up to \$1.00.</p> <p>e. Read temperature on thermometers with scales marked with one degree intervals.</p>	<p>c1. recognize and identify a penny, nickel, and dime and find the value of a given set of pennies, nickels, and dimes.</p> <p>d1. solve problems using coins to act purchasing situations and show prices in different ways.</p> <p>d2. identify a quarter and its value; identify a dollar bill.</p> <p>d3. compare the values of individual coins and combinations of coins through 10k.</p> <p>e1. investigate temperature using comparative words and identify the thermometer as a tool for measuring temperature.</p> <p>e2. investigate temperature using comparative words.</p>	<p>c1. <u>Scott Foresman</u> Teacher Edition pp. 179A-184 MTW-Summary Newsletter Ch. 7</p> <p>d1. <u>Scott Foresman</u> Teacher Edition pp. 185A-186</p> <p>d2. <u>Scott Foresman</u> Teacher Edition pp. 187A-188</p> <p>d3. d1. <u>Scott Foresman</u> Teacher Edition pp. 189A-190</p> <p>e1. <u>Scott Foresman</u> Teacher Edition pp. 153A-154 <u>Navigations</u> Measurement Pk-2 Balance the Pans pp. 34-36 Literature Connection <u>Just a Little Bit</u></p> <p>e2. <u>Scott Foresman</u> Chapter 6 pp. 153-154</p>
<p><b>Data Analysis</b></p>	<p>2. Students read, construct, and interpret picture graphs.</p>	<p>Students will:</p> <p>a1. collect, arrange and interpret concrete data.</p>	<p>a1. <u>Scott Foresman</u> Read pictographs and real groups- pp. 29-30; Read bar graphs- pp. 33-34; Read chart tables- pp. 125-126; Collect and organize data- pp. 31-34; Take a survey- pp. 33-34; interpreting data- pp. 31-34; use data in problem solving- pp. 47</p> <p><u>Navigations</u> Data Analysis</p>

		<p>a2.collect data and organize into a tally chart, bar graph, real graph, picture graph, or table.</p>	<p>&amp; Probability Pk-2          Build a Graph pp. 15-17          What’s Your Favorite pp. 18-21          Back &amp; Forth pp. 44-49  <u>About Teaching Math</u>          Tiles in the Bag p. 64          Graphing in the Classroom pp. 75-78  <u>MTW</u> ch. 6, ch. 12</p> <p>a2.<u>Scott Foresman</u>          Calendar Activities-tally chart; us of games to tally score; Making pictographs- pp. 31,32,67,68; Making bar graphs-pp. 33-34; Making charts and tables- pp. 125-126; tally charts- pp. 125-126</p> <p><u>Navigations</u> Data          Analysis &amp; Probability Pk-2          Build a Graph pp. 15-17          What’s Your Favorite pp. 18-21          Back &amp; Forth pp. 44-49</p> <p><u>About Teaching Math</u>          Tiles in the Bag p. 64          Graphing in the Classroom pp. 75-78  <u>MTW</u> ch. 6, ch. 12</p>
<p><b>Probability</b></p>	<p>No performance indicator.</p>		

## MSAD #54 Math Curriculum

Content Area: Math  
Unit: Geometry

Grade: Grade K  
MLR Span: PreK-2

### MLR Content Standard: C: **Geometry**

Students use measurement and observation to describe objects based on their sizes and shapes; model or construct two-dimensional and three-dimensional objects; solve problems involving geometric properties; compute areas and volumes based on object properties and dimensions; and perform transformations on geometric figures. When making or calculating measures students use estimation to check the reasonableness of results.

\*Assessment

<b>Geometry</b>	<b>MLR Performance Indicators</b>	<b>MSAD #54 Objectives</b>	<b>Instructional Resources/Activities</b>
<b>Geometric Figures</b>	<p>1. Students recognize, classify, and create geometric figures in two and three dimensions.</p> <p>a. Identify shapes in the physical environment.</p> <p>b. Classify figures as circles, triangles, and quadrilaterals by focusing on their properties.</p> <p>c. Create shapes by using objects to combine and decompose other shapes.</p>	<p>Students will:</p> <p>a1-c1. be able to identify solid objects shaped like a sphere, cube, cone or cylinder and identify plan figures that are flat surfaces of a solid figure.</p>	<p>a1-c1. <u>Scott Foresman Chapter 8 Navigations Problem Solving &amp; Reasoning Pk-K Shape Families pp. 17-19</u></p> <p>Literature Connection <u>Frog and Toad are Friends</u></p> <p><u>Navigations Geometry Pk-2</u> Shapes from Shapes pp. 14-16 Block Views pp. 69-78</p>
<b>Geometric Measurement</b>	<p>2. Students understand how to measure length and capacity and use appropriate units.</p> <p>a. Measure length and</p>	<p>Students will:</p> <p>a1. compare objects by length.</p>	<p>a1. <u>Scott Foresman Teacher</u></p>

	<p>capacity by direct and indirect comparison.</p> <p>b.Measure the length and capacity of objects using non-standard units.</p> <p>c.Measure the length of objects to whole inches and centimeters.</p>	<p>a2.order a set of objects by length.</p> <p>a3.compare and order containers by their capacity and measure the capacity using non-standard units.</p> <p>a4.compare and order objects by weight and measure their weight using non-standard units.</p> <p>b1.estimate and order length, width, and capacity.</p> <p>c1.estimate the length and width of objects and verify by measuring in non-standard units.</p> <p>c2.estimate and measure capacity using non-standard units.</p> <p>c3.estimate the weight of objects and measure their width in non-standard units.</p>	<p>Edition pp. 135A-136</p> <p>a2. <u>Scott Foresman</u> Teacher Edition pp. 137A-138</p> <p>a3. <u>Scott Foresman</u> Teacher Edition pp. 145A-148 <u>Navigations</u> Measurement Pk-2 Giant Steps, Baby Steps pp. 32-33</p> <p>a4. <u>Scott Foresman</u> Teacher Edition pp. 149A-151 <u>Navigations</u> Measurement Pk-2 Scoop It pp. 41-43</p> <p>b1. <u>Scott Foresman</u> Chapter 6</p> <p>c1. <u>Scott Foresman</u> Teacher Edition pp. 141A-142 <u>Navigations</u> Measurement Pk-2 Body Balance pp. 14-15</p> <p>c2. <u>Scott Foresman</u> Teacher Edition pp. 147A-148 <u>Navigations</u> Measurement Pk-2 Scavenger Hunt pp. 16-17</p> <p>c3. <u>Scott Foresman</u> Teacher Edition pp. 151A-152 <u>Navigations</u> Measurement Pk-2 String Lengths pp. 18-20</p>
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		<p>c4.measure the length and width of objects and verify by measuring in non-standard units.</p>	<p>Literature Connection  <u>Much Bigger Than Martin</u></p> <p>c4. <u>Scott Foresman</u>  Teacher Edition pp. 139A-142  <u>Navigations</u> Measurement  Pk-2  Fill It Up pp. 21-23</p>
<p><b>Transformations</b></p>	<p>No performance indicator.</p>		



	<p>means, “is the same as.”</p> <p>a. Identify true and false number sentences.</p> <p>b. Describe what makes number sentences true or false and apply this knowledge</p> <p>c. Find solutions for unknowns in simple open number sentences such as <math>12 = 4 + [ ]</math>.</p>		
<p><b>Functions and Relations</b></p>	<p>3. Students understand how to create, identify, describe, and extend patterns given a pattern or a rule.</p> <p>a. Describe, extend, and create repeating patterns.</p>	<p>Students will:</p> <p>a1. copy and extend sound, movement, color and shape patterns</p> <p>a2. compare patterns to see how they are alike and different.</p> <p>a3. solve problems by identifying patterns, determining the core that repeats, and showing the pattern in another way.</p>	<p>a1. <u>Scott Foresman</u> Teacher Edition pp. 34A-40; 45A-46 <u>MTW</u> People, Row, Patterns pp. 29-31</p> <p>a2. <u>Scott Foresman</u> Teacher Edition pp. 41A-42 <u>MTW</u> Necklace Patterns p. 42</p> <p>a3. <u>Scott Foresman</u> Teacher Edition pp. 43A-44 <u>Navigations</u> Problem Solving &amp; Reasoning Pk-2 CD ROM Making Patterns</p>

	<p>b. Describe, extend, and create growing patterns.</p>	<p>b1. be introduced to counting groups of 10 to 100 and using a hundreds chart to count by 2's, 5's, and 10's to discover patterns in numbers to 100</p>	<p>b1. <u>Scott Foresman</u>  Teacher Edition Chapter 12  <u>Navigations</u> Problem Solving &amp; Reasoning Pk-2  Fire Trucks &amp; Hats pp.14-16</p> <p><u>Navigations</u> Algebra Pk-2  Clown Line Up pp. 10-12  Snakes and More Snakes pp. 13-15</p>
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