

MSAD #54 Math Curriculum

Content Area: Math
Unit: Number

Grade: Grade 1
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
Whole Number	<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>b.Recognize the place values of digits in numbers (hundreds, tens, and ones).</p>	<p>Students will:</p> <p>a1.read and write numbers to 200.</p> <p>a2.count sets of objects, and collect the correct number of objects given a number less than 30.</p> <p>a3.count on from a given number.</p> <p>b1.model a two digit number and explain tens and ones.</p> <p>b2.estimate the positions of numbers on a number line marked only in multiples of 10.</p> <p>b3.write a given model of 100s, 10s, and 1s. (one two, and three digit numbers)</p>	<p>a1-a3.<u>Scott Foresman</u> Teacher Edition Chapter 7 & 8 TA Lessons for First Grade, Ch. 13, pp.95-102</p> <p><u>Navigations</u> Number and Operations Pk-2 pp. 23-25</p> <p>b1-b2. <u>Scott Foresman</u> Chapters 7 & 8</p> <p>b3. <u>Scott Foresman</u> Chapters 7 & 8 Box It or Bag It/Part I pp. 33, 41, 64, 65</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>b. Use an operation appropriate to a given situation</p>	<p>b4. know that any tens number is composed of ten and another number.</p> <p>c1. given 3 two digit numbers, order them from least to greater or from greatest to least.</p> <p>c2. write the numbers just before, after, or between two given numbers.</p> <p>c3. use ordinal numbers through twentieth to identify position.</p> <hr/> <p>Students will:</p> <p>a1. use multiple strategies in solving problems involving addition and subtraction of whole up to 100.</p>	<p>c1. <u>Scott Foresman</u> Chapters 7 & 8</p> <p>c2. <u>Scott Foresman</u> Chapters 7 & 8 <u>Navigations</u> Measurement pp. 52-53</p> <p>c3. <u>Scott Foresman</u> Chapters 7 & 8 <u>Navigations</u> Number and Operations Pk-2 pp. 21-22</p> <hr/> <p>a1. <u>Scott Foresman</u> Problem Strategies, examples on pages: Act it Out 215-216 Draw a Picture 111-112 Look for a Pattern 261-262 Make a graph 481-482 Make and organized list 177-178 Make a table 431-432 Try check and revise 351-352 Use logical reasoning 369-370 Use objects 21-22, 291-292 Write a number sentence 57-58, 133-134 Problem of the Day Packet <u>Navigations</u> Algebra Pk-2 pp. 36-37</p>
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		<p>a2.explain an answer to a problem using words, numbers, pictures, objects, etc.</p> <p>a3.develop the meaning of addition and subtraction through the use of stories and modeling.</p> <p>a4.introduce mental strategies for basic addition facts to 12</p> <ul style="list-style-type: none"> • Counting on • The order property • Doubles (automatic recall) • Doubles plus 1 • Make a ten • Combinations that total ten (automatic recall) <p>a5.(introduce) use mental math strategies for subtraction facts to 12</p> <ul style="list-style-type: none"> • Counting back • Using doubles <p>a6. identify fact families for related addition and subtraction facts.</p> <p>a7.develop mental math strategies for learning basic addition facts to 18</p> <p>a8.(introduce) find sums and differences of two digit</p>	<p><u>Navigations</u> Problem Solving Gr. 1 pp. 13-15</p> <p>a2.Morning Message problem of the day Investigations Box It or Bag It, Calendar, p.140</p> <p>a3. <u>Scott Foresman</u> Chapter 2 TA Lessons for First Grade Literature Connection: Ch. 5, pp. 34-39 Ch. 6, pp. 40-46 First Off the Bridge Game</p> <p>a4. <u>Scott Foresman</u> Chapter 3 Doubles Doubles plus 1 Box It or Bag It, Ch. 14, pp. 175-178 Red and Black Game Ten Flashing Fireflies Ten Frame Activities</p> <p>a5.Tens Go Fish Game <u>Scott Foresman</u> Chapter 4 TA Lessons for first Grade, Ch. 8, pp. 56-64</p> <p>a6. <u>Scott Foresman</u> Chapter 4 <u>Navigations</u> Algebra Pk-2 pp. 38-40</p> <p>a7.<u>Scott Foresman</u> Chapter 11 <u>Box It or Bag It</u>, Ch. 14 pp. 163-185</p> <p>a8. <u>Scott Foresman</u> Chapter 12</p>
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		<p>numbers.</p> <p>a9.decompose numbers to 20 into two or more quantities.</p> <p>b1.solve problems by deciding whether an estimate is enough or whether an exact answer is needed.</p> <p>b2.estimate quantities up to 100.</p> <p>b3.use estimation as a tool in problem solving.</p> <p>b4.explain and justify procedures and solutions.</p>	<p><u>Box It or Bag It</u>, Ch. 18 pp. 235-246</p> <p>a9.SF Lessons, Chapter 1 Close to 20 Game</p> <p>b1. <u>Scott Foresman</u> Lesson 12-5 <u>Navigations</u> Measurement Pk-2 pp. 24-26</p> <p>b2. <u>Scott Foresman</u> Lesson 7-5 using a group of 10 as a guide to estimate.</p> <p>b3. <u>Scott Foresman</u> Examples of problems on pp. 78, 2006, 222, 250, 300, 384, 388, 442, 468. <u>Navigations</u> Measurement Pk-2 pp. 24-26</p> <p>b4.Students should be expected to explain their reasoning, their solution process, and their answers often as a part of all lessons and activities. <u>Navigations</u> Problem Solving Gr. 1 pp. 10-12</p>
Rational Number	3.Students recognize unit fractions including $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{3}$.	Students will: a1.identify and show halves, thirds, and fourths.	a1. <u>Scott Foresman</u> Chapters 7 & 8 <u>Box It or Bag It</u> , Calendar, p. 142 <u>Navigations</u> Numbers & Operations Pk-2 Fraction Concentration
Real Number	4.No performance indicator.		

MSAD #54 Math Curriculum

Content Area: Math
Unit: Data

Grade: Grade 1
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

Data	MLR Performance Indicators	MSAD #54 Objectives	Instructional Resources/Activities
Measurement and Approximation	<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. read and use a calendar to name the days of the week.</p> <p>a2. identify and order the months of the year.</p> <p>b1. identify the hour hand, the minute hand, and their functions.</p> <p>b2. tell and write time to the hour on an analog and digital clock.</p> <p>b3. tell and write time to the half hour on an analog and digital clock.</p>	<p>a1. <u>Scott Foresman</u> Chapter 6</p> <p>a2. <u>Scott Foresman</u> Chapter 6 TA, Lessons for First Grade, Ch. 1, P. 1</p> <p>b1-b3. <u>Scott Foresman</u> Chapter 6</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. identify and give values of pennies, nickels, dimes, quarter, and half dollar coins.</p> <p>d1. count combinations of pennies, nickels, dimes, quarters, and half dollar coins totaling up to \$1.00. (one type of coin at a time)</p> <p>e1. read the temperature on a thermometer with a scale marked in one degree intervals.</p>	<p>c1-d1. <u>Scott Foresman</u> Chapter 9 <u>Box It or Bag It</u> Ch. 16, pp. 191-206</p> <p>e1. <u>Scott Foresman</u> Lesson 10-14</p>
<p>Data Analysis</p>	<p>2. Students read, construct, and interpret picture graphs.</p>	<p>Students will:</p> <p>a1. formulate and solve problems by collecting, arranging, and interpreting data.</p> <p>a2. collect data and organize into picture graphs, bar graphs, tally charts, and frequency tables.</p>	<p>a1. <u>Scott Foresman</u> Children create questions, collect data and determine a way to present the information in a graph; Ch. 8, 8-17, 323-324, 7-6 <u>Navigations</u> Data Analysis and Probability Pk-2 Families pp. 30-32 Row Your Boat pp.33-35 Mystery Graphs pp. 50-52 <u>Navigations</u> Problem Solving Gr. 1, pp. 23-25</p> <p>a2. <u>Scott Foresman</u> Chapter 6, lessons 8-12, 8-13, 8-14 Calendar activities, tallying number of days in school, etc. Tallying scored in games, etc. <u>Navigations</u> Data Analysis and Probability Pk-2 Families pp. 30-32 Row Your Boat pp.33-35 Mystery Graphs pp. 50-52 <u>Navigations</u> Problem Solving Gr. 1, pp. 23-25</p>
<p>Probability</p>	<p>No performance indicator.</p>		

MSAD #54 Math Curriculum

Content Area: Math
Unit: Geometry

Grade: Grade 1
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

Geometry	MLR Performance Indicators	MSAD #54 Objectives	Instructional Resources/Activities
Geometric Figures	<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. identify and name plane figures (circle, rectangle, square, triangle) and solid figures (cone, cube, cylinder, sphere, rectangular prism) and recognize them in the environment.</p> <p>b1. sort plane shapes and identify their properties.</p> <p>c1. create shapes by using objects to combine and decompose other shapes.</p>	<p>a1. <u>Scott Foresman Chapter 5, 5-1-5-4 Navigations Geometry Pk-2 pp. 19-21</u> <u>Navigations Problem Solving Gr. 1 pp. 16-19</u></p> <p>b1. <u>Scott Foresman 5-5, 5-6 Navigations Geometry Pk-2 pp. 19-21</u></p> <p>c1. <u>Scott Foresman Lessons</u> <u>Tangram activities</u></p>
Geometric Measurement	<p>2. Students understand how to measure length and capacity</p>	<p>Students will:</p>	

	<p>and use appropriate units.</p> <p>a. Measure length and 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>a1. determine more/less, larger/smaller, or longer/shorter by comparing capacities and lengths side by side.</p> <p>a2. determine longer/shorter by comparing objects to a third object.</p> <p>b1. estimate, measure, and compare capacities of containers.</p> <p>c1. estimate and measure objects to nearest inch; nearest centimeter.</p>	<p>a1-a2. <u>Scott Foresman Lessons Ch. 10</u></p> <p>b1. <u>Scott Foresman</u> chapter 6, lesson 10-8 <u>Navigations Measurement Pk-2</u>, pp. 21-23</p> <p>c1. <u>Scott Foresman Ch. 6 Navigations Measurement Pk-2</u>, pp. 18-20 <u>Scott Foresman Lesson 10-3 & 10-4</u> <u>Box It or Bag It, Ch. 15</u>, pp. 186-188 <u>Literature Connection</u> pp. 49-51, 54-55, 37-40, 44-46, 47-48, & 54-55</p>
<p>Transformations</p>	<p>No performance indicator.</p>		

MSAD #54 Math Curriculum

Content Area: Math
Unit: Algebra

Grade: Grade 1
MLR Span: PreK-2

MLR Content Standard: D: Algebra

Students use symbols to represent or model quantities, patterns, and relationships and use symbolic manipulation to evaluate expressions and solve equations. Students solve problems using symbols, tables, graphs, and verbal rules choosing the most effective representation and converting among representatives.

*Assessment

Algebra	MLR Performance Indicators	MSAD #54 Objectives	Instructional Resources/Activities
Symbols and Expressions	<p>1. Students understand how to represent quantities as simple expressions using addition and subtraction.</p> <p>a. Show that any quantity can be represented by multiple equivalent expressions where each represents the quantity ten.</p> <p>b. Show that addition is commutative and apply this understanding in computation and problem-solving.</p> <p>c. Know that addition and subtraction are inverse operations and apply this understanding in computation and problem-solving.</p>	<p>Students will:</p> <p>a1. know all combinations of 10 (eg. $10 = 3+7$, $10 = 5+5$, etc.)</p> <p>b1. know that the order of addends doesn't affect the sum, and apply that fact to computation (eg. $2+9 = 9+2$ and counting on from 9 is easier than counting on from 2).</p> <p>c1. write related addition and subtraction facts.</p> <p>c2. identify fact families for related addition and subtraction facts.</p>	<p>a1. SF Lessons 1-4, 3-8</p> <p>c1. <u>Scott Foresman Ch.4 Navigations Algebra Pk-2</u> pp. 62-64 <u>Box It or Bag It Ch 13,</u> pp. 163-174</p> <p>c2. <u>Scott Foresman Ch.4</u></p>

<p>Equations and Inequalities</p>	<p>2.Students understand that the equal sign 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 $12 = 4 + []$.</p>	<p>c3. Solve story problems with missing variables.</p> <p>Students will:</p> <p>a1. identify true and false number sentences.</p> <p>b1. describe what makes number sentences true or false and apply this knowledge</p> <p>c1. draw a picture to show related facts and to solve unknown.</p>	<p>c3. <u>Scott Foresman</u> Ch.4 <u>Navigations</u> Algebra Pk-2 pp. 19-21</p> <p>a1-b1. Teacher created materials True/False Number Sentences for Grade 1</p> <p>c1. <u>Navigations</u> Algebra Pk-2 pp. 16-18 <u>Navigations</u> Problem Solving Gr. 1 pp. 13-15</p>
<p>Functions and Relations</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>b. Describe, extend, and create growing patterns.</p>	<p>a1. use shapes to create patterns, and then translate the patterns into letters.</p> <p>b1. given a number less than 60 determine if a number is odd or even. (focus on patterns for odd/even)</p> <p>b2. use a hundred’s chart to skip count by 2s, 5s, and 10s and then find patterns.</p>	<p>a1. <u>Scott Foresman</u> Ch. 1 1-1, 1-2 <u>Navigations</u> Algebra Pk-2 pp. 16-18, 19-21, 22-24 <u>Box It or Bag It</u> Ch. 13 pp. 154-162</p> <p>b1. <u>Scott Foresman</u> Ch. 7 & 8 TA Lessons for First Grade pp. 103-111</p> <p>b2. <u>Scott Foresman</u> Ch. 7 & 8 <u>Navigations</u> Algebra Pk-2</p>

			pp. 19-23 Box It or Bag It Part I, pp. 33, 41, 64, 65
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