

First Nine Weeks					
Grade: 4		Subject: Math CIP Pacing Guide		Year: 2017-2018	
# of Days	SOL	Student Essential Knowledge and Skills	Resources	Vocabulary	Bloom's
	<p><b>Number and Number Sense</b></p> <ul style="list-style-type: none"> <li>Identify (orally and in writing) the place value for each digit in a whole number expressed through millions. <b>(4.1a) (Benchmark)</b></li> </ul> <p><b>Number and Number Sense</b></p> <ul style="list-style-type: none"> <li>Compare two whole numbers expressed through millions using symbols (&gt;, &lt;, or =) <b>(4.1b) (Benchmark)</b></li> </ul> <p><b>Number and Number Sense</b></p> <ul style="list-style-type: none"> <li>Round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand. <b>(4.1c) (Benchmark)</b></li> </ul>	<p>Identify and communicate, both orally and in written form, the place value for each digit in whole numbers expressed through the one millions place.</p> <ul style="list-style-type: none"> <li>Read whole numbers through the one millions place that are presented in standard format, and select the matching number in written format.</li> <li>Write whole numbers through the one millions place in standard format when the numbers are presented orally or in written format</li> </ul> <p>Identify and use the symbols for <i>greater than</i>, <i>less than</i>, and <i>equal to</i>.</p> <ul style="list-style-type: none"> <li>Compare two whole numbers expressed through the one millions, using symbols &gt;, &lt;, or =.</li> </ul> <p>Round whole numbers expressed through the one millions place to the nearest thousand, ten thousand, and hundred-thousand place.</p>	<p>Scope and Sequence (Curriculum Framework)</p> <p><a href="http://www.rockingham.k12.va.us">http://www.rockingham.k12.va.us</a></p>	<p>Place value Ones Tens Hundreds Thousands Ten thousands Hundred thousands Millions Digit Whole number Written format Standard format Greater than Less than Equal to Same Compare</p> <p>Place value Ones Tens Hundreds Thousands Ten thousands Hundred thousands</p>	<p>Identify-L2 Communicate- L3 Read-L1 Select-L1 Write-L3 Compare-L4 Identify-L2 Use-L3 Round-L3</p>

				Millions Digit Whole number Written format Standard format Greater than Less than Equal to Same Compare	
	<p><b>Computation and Estimation</b></p> <ul style="list-style-type: none"> <li>Estimate sums, differences, products, and quotients of whole numbers (4.4a) (Benchmark)</li> <li>Add, subtract, and multiply whole numbers (4.4b) (Benchmark)</li> <li>Solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers (4.4d) (Benchmark)</li> </ul>	Estimate whole number sums and differences <ul style="list-style-type: none"> <li>Refine estimates by adjusting the final amount, using terms such as <i>closer to</i>, <i>between</i>, and <i>a little more than</i>.</li> <li>Determine the sum or difference of two whole numbers, each 999,999 or less, in vertical and horizontal form with or without regrouping, using paper and pencil, and using a calculator.</li> <li>Solve single-step and multistep problems using whole number operations.</li> <li>Verify the reasonableness of sums and differences of whole</li> </ul>	Scope and Sequence (Curriculum Framework)  <a href="http://www.rockingham.k12.va.us">http://www.rockingham.k12.va.us</a>	sum difference estimate compatible numbers closer to between a little more than front-end estimation addend minuend subtrahend	Estimate-L2 Add-L3 Subtract-L3 Solve-L3 Refine-L4 Determine-L3 Verify-L4 Divide-L3 Refine-L4 Find-L3

	<ul style="list-style-type: none"> <li>• <b>Divide</b> whole numbers, finding quotients with and without remainders <b>(4.4c) (Benchmark)</b></li> </ul>	<p>numbers using estimation.</p>			
	<p><b>Probability and Statistics</b></p> <ul style="list-style-type: none"> <li>• Collect, organize, display, and interpret data from a variety of graphs <b>(4.14)</b></li> </ul>	<p><b>Collect</b> data, using, for example, observations, measurement, surveys, scientific experiments, polls, or questionnaires.</p> <ul style="list-style-type: none"> <li>• <b>Organize</b> data into a chart or table.</li> <li>• Construct and display data in bar graphs, labeling one axis with equal whole number increments of 1 or more (numerical data) (e.g., 2, 5, 10, or 100) and the other axis with categories related to the title of the graph (categorical data) (e.g., swimming, fishing, boating, and water skiing as the categories of “Favorite Summer Sports”).</li> <li>• Construct and <b>display</b> data in line graphs, labeling the vertical axis with equal whole number increments of 1 or more and the horizontal axis with continuous data commonly related to time (e.g., hours, days, months, years, and age). Line graphs will have no more than 10 identified points along a continuum for continuous data. For example, growth charts showing age versus height place age on the horizontal axis (e.g., 1 month, 2 months, 3 months, and 4 months).</li> <li>• <b>Title</b> or <b>identify</b> the title in a</li> </ul>	<p><a href="http://www.pennsa.uken.net/math/spreadsheet/index.html">http://www.pennsa.uken.net/math/spreadsheet/index.html</a></p> <p><a href="http://nces.ed.gov/nceskids/createagraph/default.aspx">http://nces.ed.gov/nceskids/createagraph/default.aspx</a></p> <p><a href="http://nces.ed.gov/nceskids/graphing/classic/">http://nces.ed.gov/nceskids/graphing/classic/</a></p> <p><a href="http://www.mathgoodies.com/lessons/graphs/line.html">http://www.mathgoodies.com/lessons/graphs/line.html</a></p> <p>VA DOE Enhanced Scope and Sequence</p> <p><a href="http://exchange.smarttech.com/index.html?WT.ac=NB_search">http://exchange.smarttech.com/index.html?WT.ac=NB_search</a></p> <p>(search topic)</p>	<p>Data bar graph line graph axis vertical axis horizontal axis title increments scale</p>	<p>Collect-L3 Organize-L4 Display-L6 Interpret-L4 Construct-L6 Labeling-L1 Title-L3 Identify-L2</p>

		<p>given graph and label or identify the axes.</p> <p>Interpret data from simple line and bar graphs by describing the characteristics of the data and the data as a whole (e.g., the category with the greatest/least, categories with the same number of responses, similarities and differences, the total number). Data points will be limited to 30 and categories to 8</p> <ul style="list-style-type: none"> <li>Interpret the data to answer the question posed, and compare the answer to the prediction (e.g., “The summer sport preferred by most is swimming, which is what I predicted before collecting the data.”).</li> <li>Write at least one sentence to describe the analysis and interpretation of the data, identifying parts of the data that have special characteristics, including categories with the greatest, the least, or the same.</li> </ul>			
	<p><b><u>Patterns, Functions, and Algebra</u></b></p> <ul style="list-style-type: none"> <li>Recognize, create, and extend numerical and geometric patterns, using concrete materials, number lines, symbols, tables, and words. (4.15)</li> </ul>	<p>Describe geometric and numerical patterns, using tables, symbols, or words.</p> <ul style="list-style-type: none"> <li>Create geometric and numerical patterns, using concrete materials, number lines, tables, and words.</li> <li>Extend geometric and numerical patterns, using concrete materials, number lines, tables, and words.</li> </ul>	<p>Scope and Sequence (Curriculum Framework)</p> <p><a href="http://www.rockingham.k12.va.us">http://www.rockingham.k12.va.us</a></p>	<p>extend numerical geometric patterns</p>	<p>Recognize-L1 Create-L6 Extend-L2 Describe-L2</p>
	<p><b><u>Patterns, Functions, and Algebra</u></b></p>	<p>Recognize and demonstrate that the equals sign (=) relates equivalent</p>	<p>Scope and Sequence (Curriculum Framework)</p>	<p>equivalent communicati</p>	<p>Recognize-L1</p>

	<ul style="list-style-type: none"> <li>Recognize and demonstrate the meaning of equality in an equation <b>(4.16a)</b></li> <li><b>Investigate</b> and <b>describe</b> the associative property for multiplication <b>(4.16b)</b></li> </ul>	<p>quantities in an equation.</p> <ul style="list-style-type: none"> <li><b>Write</b> an equation to <b>represent</b> equivalent mathematical relationships (e.g., <math>4 \times 3 = 2 \times 6</math>).</li> <li><b>Recognize</b> and <b>demonstrate</b> appropriate use of the equals sign in an equation.</li> <li><b>Investigate</b> and <b>describe</b> the associative property for multiplication as <math>(3 \times 2) \times 4 = 3 \times (2 \times 4)</math>.</li> </ul>	<p><a href="http://www.rockingham.k12.va.us">http://www.rockingham.k12.va.us</a></p>	<p>ve property for multiplication associative property for multiplication</p>	<p>Investigate-L4 Describe-L2 Demonstrate-L3 Relates-L3 Write-L3 Represent-L2</p>
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Second Nine Weeks					
Grade: 4		Subject: Math		Year: 2017-2018	
# of Days	SOL	Student Essential Knowledge and Skills	Resources	Vocabulary	Bloom's
	<p><b>Computation and Estimation</b></p> <ul style="list-style-type: none"> <li>Estimate sums, differences, products, and quotients of whole numbers (4.4a) (Benchmark)</li> <li>Add, subtract, and multiply whole numbers (4.4b) (Benchmark)</li> <li>Solve single-step and multistep addition, subtraction, and multiplication problems with whole numbers (4.4d) (Benchmark)</li> <li>Divide whole numbers, finding quotients with and without remainders (4.4c) (Benchmark)</li> </ul>	<p>Estimate whole number sums and differences</p> <ul style="list-style-type: none"> <li>Refine estimates by adjusting the final amount, using terms such as <i>closer to</i>, <i>between</i>, and <i>a little more than</i>.</li> <li>Determine the sum or difference of two whole numbers, each 999,999 or less, in vertical and horizontal form with or without regrouping, using paper and pencil, and using a calculator.</li> <li>Solve single-step and multistep problems using whole number operations.</li> <li>Verify the reasonableness of sums and differences of whole numbers using estimation.</li> </ul> <p>Estimate and find the quotient of two whole numbers, given a one-digit divisor and a two- or three-digit dividend.</p>	<p>Scope and Sequence (Curriculum Framework)</p> <p><a href="http://www.rockingham.k12.va.us">http://www.rockingham.k12.va.us</a></p>	<p>sum difference estimate compatible numbers closer to between a little more than front-end estimation addend minuend subtrahend Divisor Dividend Estimate Quotient</p>	<p>Estimate-L2 Add-L3 Subtract-L3 Solve-L3 Refine-L4 Determine-L3 Verify-L4 Divide-L3 Refine-L4 Find-L3</p>
	<p><b>Geometry</b></p> <ul style="list-style-type: none"> <li>Identify and describe representations of points, lines, line segments, rays, and angles, including endpoints and vertices (4.10a) (Benchmark)</li> </ul> <p><b>Geometry</b></p> <ul style="list-style-type: none"> <li>Identify representations of</li> </ul>	<p>Identify and describe representations of points, lines, line segments, rays, and angles, including endpoints and vertices.</p> <p>Understand that lines in a plane can intersect or are parallel. Perpendicularity is a special case of intersection.</p> <ul style="list-style-type: none"> <li>Identify practical situations that</li> </ul>	<p>(See 4.5 Resources)</p>	<p>Points Lines Line segments Rays Angles End points Vertices</p>	<p>Identify-L2 Describe-L2 Understand-L2</p>

	lines that illustrate intersection, parallelism, and perpendicularity <b>(4.10b)</b> <b>(Benchmark)</b>	illustrate parallel, intersecting, and perpendicular lines.		Representations Intersect Parallel Plane Intersect Perpendicular Illustrate	
	<p><b>Geometry</b></p> <ul style="list-style-type: none"> <li>Investigate congruence of plane figures after geometric transformations, such as reflection, translation, and rotation, using mirrors, paper folding, and tracing <b>(4.11a)</b> <b>(Benchmark)</b></li> </ul> <p><b>Geometry</b></p> <ul style="list-style-type: none"> <li>Recognize the images of figures resulting from geometric transformations, such as translation, reflection, and rotation <b>(4.11b)</b> <b>(Benchmark)</b></li> </ul>	Recognize the congruence of plane figures resulting from geometric transformations such as translation, reflection, and rotation, using mirrors, paper folding and tracing.			Investigate-L4 Recognize-L1
	<p><b>Geometry</b></p> <ul style="list-style-type: none"> <li>Define polygon <b>(4.12a)</b> <b>(Benchmark)</b></li> </ul> <p><b>Geometry</b></p> <ul style="list-style-type: none"> <li>Identify polygons with 10 or fewer sides <b>(4.12b)</b> <b>(Benchmark)</b></li> </ul>	Define and identify properties of polygons with 10 or fewer sides. Identify polygons by name with 10 or fewer sides in multiple orientations (rotations, reflections, and translations of the polygons).		Properties Polygon Rotations Reflections Translations Orientations	Define-L1 Identify-L2

Third Nine Weeks					
Grade: 4		Subject: Math		Year: 2017-2018	
# of Days	SOL	Student Essential Knowledge and Skills	Resources	Vocabulary	Bloom's
	<p><b>Computation and Estimation</b></p> <ul style="list-style-type: none"> <li>Add and subtract with decimals (4.5c) (Benchmark)</li> </ul> <p><b>Computation and Estimation</b></p> <ul style="list-style-type: none"> <li>Determine common multiples and factors, including least common multiple and greatest common factor (4.5a) (Benchmark)</li> </ul> <p><b>Computation and Estimation</b></p> <ul style="list-style-type: none"> <li>Add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors (4.5b) (Benchmark)</li> </ul> <p><b>Computation and Estimation</b></p> <ul style="list-style-type: none"> <li>Solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals (4.5d) (Benchmark)</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract with decimals through thousandths, using concrete materials, pictorial representations, and paper and pencil.</li> <li>Find common multiples and common factors of numbers.</li> <li>Determine the least common multiple and greatest common factor of numbers.</li> <li>Use least common multiple and/or greatest common factor to find a common denominator for fractions.</li> <li>Add and subtract with fractions having like denominators whose denominators are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fraction using common multiples and factors.</li> <li>Add and subtract with fractions having unlike denominators whose denominators are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fraction using common multiples and factors.</li> <li>Solve problems that involve adding and subtracting with fractions having like and unlike denominators whose denominators are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fraction using</li> </ul>	<p>Scope and Sequence (Curriculum Framework)</p> <p><a href="http://www.rockingham.k12.va.us">http://www.rockingham.k12.va.us</a></p> <p>Scott Foresman Math Textbook</p> <p>Portaportal Fast Math</p> <p>GoSolve Brain Pop Study</p> <p>Island IXL <a href="http://www.ixl.com/">http://www.ixl.com/</a></p> <p>Quia <a href="http://www.quia.com/web">http://www.quia.com/web</a></p> <p>National Library of Virtual Manipulatives <a href="http://nlvm.usu.edu">http://nlvm.usu.edu</a></p> <p>The Math Worksheet Site.com <a href="http://themathtworksheetsite.com/">http://themathtworksheetsite.com/</a></p> <p>AAA Math <a href="http://www.321know.com">http://www.321know.com</a> About.com Mathematics <a href="http://math.about.com/">http://math.about.com/</a></p> <p>Suffolk County <a href="http://www.spsk12.net/departments/staff/">http://www.spsk12.net/departments/staff/</a></p> <p>Rockingham County Public Schools <a href="http://www.rockingham.k12.va.us/resources/elementary/4_math.htm">http://www.rockingham.k12.va.us/resources/elementary/4_math.htm</a></p> <p>MrNussbaum <a href="http://www.mrnussbaum.com/index.html">http://www.mrnussbaum.com/index.html</a></p> <p>Smart Exchange <a href="http://exchange.smarttech.com/index">http://exchange.smarttech.com/index</a></p>	<p>tenths</p> <p>hundredths</p> <p>thousandths</p> <p>decimal point</p> <p>add</p> <p>subtract</p> <p>decimal</p> <p>Denominator</p> <p>Numerator</p> <p>Simplify</p>	<p>Add-L3</p> <p>Subtract-L3</p> <p>Simplify-L3</p> <p>Solve-L3</p>

		<p>common multiples and factors.</p> <p>Solve single-step and multistep problems that involve adding and subtracting with fractions and decimals through thousandths.</p>	<p><a href="http://www.tlsbooks.com/html">html</a>          TLSBooks.com <a href="http://www.tlsbooks.com/">http://www.tlsbooks.com/</a></p>		
	<p><b>Number and Number Sense</b>          • Compare and order fractions and mixed numbers (4.2a) (Benchmark)</p> <p><b>Number and Number Sense</b>          • Represent equivalent fractions (4.2b) (Benchmark)</p> <p>Identify the division statement that represents a fraction (4.2c) (Benchmark)</p>	<p>Compare and order fractions having denominators of 12 or less, using manipulative models and drawings, such as region/area models.</p> <p>Compare and order fractions with like denominators by comparing number of parts (numerators) (<math>1/5 &gt; 3/5</math>.)</p> <p>Compare and order fractions with like numerators and unlike denominators by comparing the size of the parts: (<math>3/9 &lt; 3/5</math>)</p> <p>Compare and order fractions having unlike denominators of 12 or less by comparing the fractions to benchmarks: (0, <math>1/2</math>, 1) to determine their benchmarks benchmarks or by finding a common denominator.</p> <p>Compare and order mixed numbers having denominators of 12 or less.          Use the symbols <math>&gt;</math>, <math>&lt;</math>, and <math>=</math> to compare the numerical value of fractions and mixed numbers having denominators of 12 or less.</p> <p>Represent equivalent fractions through twelfths, using region/area models, set models, and measurement models.</p> <p>Identify the division statement that represents a fraction (<math>3/5</math> means the same</p>	<p><a href="http://www.abcya.com/fraction_tiles.htm">http://www.abcya.com/fraction_tiles.htm</a>  <a href="http://www.mathplayground.com/Scale_Fractions.html">http://www.mathplayground.com/Scale_Fractions.html</a>  <a href="http://exchange.smarttech.com/index.html?WT.ac=NB_search#tab=0">http://exchange.smarttech.com/index.html?WT.ac=NB_search#tab=0</a>          Enhanced Scope and Sequence Grid paper  <a href="http://www.rockingham.k12.va.us">http://www.rockingham.k12.va.us</a>          Curriculum Framework</p>	<p>denominator          numerator          equivalent          compare          order          mixed          numbers          improper          fractions          Equivalent          Numerator          Denominator          Concrete          Division          Fraction          Represents          statement</p>	<p>Compare-L4          Order-L4          Using-L3          Represent-L2          Identify-L2</p>

	<p><b>Number and Number Sense</b></p> <ul style="list-style-type: none"> <li>Read, write, represent, and identify decimals expressed through the thousandths; (4.3a) (Benchmark)</li> </ul> <p><b>Number and Number Sense</b></p> <ul style="list-style-type: none"> <li>Round to the nearest whole number, tenth, hundredth, and thousandth (4.3b) (Benchmark)</li> </ul> <p><b>Number and Number Sense</b></p> <ul style="list-style-type: none"> <li>Compare the value of two decimals, using symbols (<math>&gt;</math>, <math>&lt;</math>, or <math>=</math>), concrete materials, drawings, and calculators. (4.3c) (Benchmark)</li> </ul> <p><b>Number and Number Sense</b></p> <ul style="list-style-type: none"> <li>Given a model write the decimal and fraction equivalents (4.3d) (Benchmark)</li> </ul>	<p>as 3 divided by 5.)</p> <p>Identify and communicate, both orally and in written form, the position and value of a decimal through thousandths. For example, in 0.385, the 8 is in the hundredths place and has a value of 0.08.</p> <ul style="list-style-type: none"> <li>Investigate the ten-to-one place-value relationship for decimals through thousandths, using base-10 manipulatives (e.g., place-value mats/charts, decimal squares, base-10 blocks, money).</li> <li>Represent and identify decimals expressed through thousandths, using base-10 manipulatives, pictorial representations, calculators, and numerical symbols (e.g., relate the appropriate drawing to 0.005).</li> <li>Read and write decimals expressed through thousandths, using base-10 manipulatives, drawings, calculators, and numerical symbols. Any decimal less than 1 will include a leading zero (e.g., 0.125).</li> </ul> <p>Round decimals to the nearest whole number, tenth, and hundredth</p> <p>Compare the value of two decimals, using the symbols <math>&gt;</math>, <math>&lt;</math>, <math>=</math>.</p> <ul style="list-style-type: none"> <li>Order a set of decimals from least to greatest or greatest to least.</li> <li>Represent fractions for halves, fourths, fifths, and tenths as</li> </ul>	<p>Scope and Sequence (Curriculum Framework)</p> <p><a href="http://www.rockingham.k12.va.us">http://www.rockingham.k12.va.us</a></p> <p>Scope and Sequence (Curriculum Framework)</p> <p><a href="http://www.rockingham.k12.va.us">http://www.rockingham.k12.va.us</a></p>	<p>Tenths</p> <p>Hundredths</p> <p>Thousandths</p> <p>Decimal point Order</p> <p>Rounding to the nearest</p> <p>Greater than</p> <p>Less than</p> <p>Equal to</p> <p>Same Symbols</p> <p>Model</p> <p>Equivalents</p> <p>Fraction</p> <p>Decimal</p>	<p>Read-L1</p> <p>Identify-L2</p> <p>Communicate- L3</p> <p>Investigate-L4</p> <p>Represent-L2</p> <p>Write-L3</p> <p>Round-L3</p> <p>Compare-L4</p> <p>Order-L4</p> <p>Write-L3</p> <p>Represent-L2</p> <p>Relate-L3</p>
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		<p>decimals through hundredths, using concrete objects (e.g., demonstrate the relationship between the fraction <math>\frac{1}{4}</math> and its decimal equivalent 0.25).</p> <ul style="list-style-type: none"><li>• <b>Relate</b> fractions to decimals, using concrete objects (e.g., 10-by-10 grids, meter sticks, number lines, decimal squares, decimal circles, money [coins]).</li><li>• <b>Write</b> the decimal and fraction equivalent for a given model: (<math>1/4=0.25</math> or <math>0.25=1/4</math>).</li></ul>			
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## Fourth Nine Weeks

(These are the math skills not listed on a benchmark test. You may teach them in any of the nine weeks in conjunction with the benchmark skills.)

Grade: 4		Subject: Math		Year: 2017-2018	
# of Days	SOL	Student Essential Knowledge and Skills	Resources	Vocabulary	Bloom's
	<p><b>Probability and Statistics</b></p> <ul style="list-style-type: none"> <li>Predict the likelihood of an outcome of a simple event (4.13a)</li> </ul> <p><b>Probability and Statistics</b></p> <ul style="list-style-type: none"> <li>Represent probability as a number between 0 and 1, inclusive (4.13b)</li> </ul>	<p><b>Model</b> and <b>determine</b> all possible outcomes of a given simple event where there are no more than 24 possible outcomes, using a variety of manipulatives, such as coins, number cubes, and spinners.</p> <ul style="list-style-type: none"> <li><b>Write</b> the probability of a given simple event as a fraction, where the total number of possible outcomes is 24 or fewer.</li> <li><b>Determine</b> the outcome of an event that is least likely to occur (less than half) or most likely to occur (greater than half) when the number of possible outcomes is 24 or less.</li> </ul> <p>Identify the likelihood of an event occurring and relate it to its fractional representation</p> <p>(e.g., impossible/0; equally likely/<math>\frac{1}{2}</math>; certain/1).</p> <ul style="list-style-type: none"> <li><b>Represent</b> probability as a point between 0 and 1, inclusively, on a number line.</li> </ul>	<p><a href="http://nlvm.usu.edu/en/nav/category_g_2_t_5.html">http://nlvm.usu.edu/en/nav/category_g_2_t_5.html</a></p> <p><a href="http://www.bbc.co.uk/education/mathsfile/shockwave/games/fish.html">http://www.bbc.co.uk/education/mathsfile/shockwave/games/fish.html</a></p> <p><a href="http://www.harcourtschool.com/activity/elab2004/gr4/24.html">http://www.harcourtschool.com/activity/elab2004/gr4/24.html</a></p> <p><a href="http://www.mathplayground.com/probability.html">http://www.mathplayground.com/probability.html</a></p> <p><a href="http://www.pennsauken.net/math/probability/index.html">http://www.pennsauken.net/math/probability/index.html</a></p> <p>Va DOE Enhanced Scope and Sequence</p> <p><a href="http://exchange.smarttech.com/index.html?WT.ac=NB_search">http://exchange.smarttech.com/index.html?WT.ac=NB_search</a> (search topic)</p> <p><a href="http://exchange.smarttech.com/index.html?WT.ac=NB_search">http://exchange.smarttech.com/index.html?WT.ac=NB_search</a> (search topic)</p>	<p>probability</p> <p>predict</p> <p>possible outcomes event</p> <p>least likely</p> <p>most likely</p> <p>certain</p> <p>impossible</p> <p>equally likely</p> <p>likelihood</p>	<p>Predict-L6</p> <p>Model-L6</p> <p>Determine-L3</p> <p>Write-L3</p> <p>Represent-L2</p> <p>Identify-L2</p> <p>Relate-L3</p>
	<p><b>Probability and Statistics</b></p> <ul style="list-style-type: none"> <li>Collect, organize, display, and interpret data from a</li> </ul>	<p><b>Collect</b> data, using, for example, observations, measurement, surveys,</p>	<p><a href="http://www.pennsauken.net/math/spreadsheet/index.html">http://www.pennsauken.net/math/spreadsheet/index.html</a></p> <p><a href="http://nces.ed.gov/nceskids/createagr">http://nces.ed.gov/nceskids/createagr</a></p>	<p>Data</p> <p>bar graph</p> <p>line graph</p>	<p>Collect-L3</p> <p>Organize-L4</p>

	<p>variety of graphs (4.14)</p>	<p>scientific experiments, polls, or questionnaires.</p> <ul style="list-style-type: none"> <li>• <b>Organize</b> data into a chart or table.</li> <li>• <b>Construct</b> and <b>display</b> data in bar graphs, <b>labeling</b> one axis with equal whole number increments of 1 or more (numerical data) (e.g., 2, 5, 10, or 100) and the other axis with categories related to the title of the graph (categorical data) (e.g., swimming, fishing, boating, and water skiing as the categories of “Favorite Summer Sports”).</li> <li>• <b>Construct</b> and <b>display</b> data in line graphs, <b>labeling</b> the vertical axis with equal whole number increments of 1 or more and the horizontal axis with continuous data commonly related to time (e.g., hours, days, months, years, and age). Line graphs will have no more than 10 identified points along a continuum for continuous data. For example, growth charts showing age versus height place age on the horizontal axis (e.g., 1 month, 2 months, 3 months, and 4 months).</li> <li>• <b>Title</b> or <b>identify</b> the title in a given graph and <b>label</b> or <b>identify</b> the axes.</li> </ul> <p><b>Interpret</b> data from simple line and bar graphs by <b>describing</b> the characteristics of the data and the data as a whole (e.g., the category with the greatest/least, categories with the same number of responses,</p>	<p><a href="#">aph/default.aspx</a></p> <p><a href="http://nces.ed.gov/nceskids/graphing/classic/">http://nces.ed.gov/nceskids/graphing/classic/</a></p> <p><a href="http://www.mathgoodies.com/lessons/graphs/line.html">http://www.mathgoodies.com/lessons/graphs/line.html</a></p> <p>VA DOE Enhanced Scope and Sequence</p> <p><a href="http://exchange.smarttech.com/index.html?WT.ac=NB_search">http://exchange.smarttech.com/index.html?WT.ac=NB_search</a></p> <p>(search topic)</p>	<p>axis vertical axis horizontal axis title increments scale</p>	<p>Display-L6 Interpret-L4 Construct-L6 Labeling-L1 Title-L3 Identify-L2</p>
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		<p>similarities and differences, the total number). Data points will be limited to 30 and categories to 8</p> <ul style="list-style-type: none"> <li>• <b>Interpret</b> the data to <b>answer</b> the question posed, and <b>compare</b> the answer to the prediction (e.g., “The summer sport preferred by most is swimming, which is what I predicted before collecting the data.”).</li> <li>• <b>Write</b> at least one sentence to <b>describe</b> the analysis and interpretation of the data, <b>identifying</b> parts of the data that have special characteristics, including categories with the greatest, the least, or the same.</li> </ul>			
	<p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>• Estimate and measure weight/mass and describe the results in U.S. Customary and metric units as appropriate <b>(4.6a)</b></li> </ul> <p>Identify equivalent measurements between units within the U.S. Customary system (ounces, pounds, and tons) and between units within the metric system (grams and kilograms). <b>(4.6b)</b></p>	<ul style="list-style-type: none"> <li>• <b>Determine</b> an appropriate unit of measure (e.g., ounce, pound, ton, gram, kilogram) to <b>use</b> when measuring everyday objects in both metric and U.S. Customary units.</li> <li>• <b>Measure</b> objects in both metric and U.S. Customary units (e.g., ounce, pound, ton, gram, or kilogram) to the nearest appropriate measure, using a variety of measuring instruments.</li> </ul> <p><b>Record</b> the mass of an object including the appropriate unit of measure (e.g., 24 grams).</p>	<p>VA DOE Enhanced Scope and Sequence</p> <ul style="list-style-type: none"> <li>• <a href="http://www.linkslearning.org/Kids/index.html">http://www.linkslearning.org/Kids/index.html</a></li> </ul>	<p>U.S. Customary Metric estimate weight mass ounces pounds tons grams equivalent measurements</p>	<p>Estimate-L2 Measure-L5 Determine-L3 Use-L3 Identify-L2 Record-L1</p>
	<p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>• <b>Estimate</b> and measure length, and describe the result in both metric and U.S. Customary units <b>(4.7a)</b></li> <li>• <b>Identify</b> equivalent measurements between</li> </ul>	<p><b>Determine</b> an appropriate unit of measure (e.g., inch, foot, yard, mile, millimeter, centimeter, and meter) to use when measuring everyday objects in both metric</p>	<p><a href="http://www.linkslearning.org/Kids/index.html">http://www.linkslearning.org/Kids/index.html</a></p> <p><a href="http://www.hbschool.com/activity/ela2004/gr3/22.html">http://www.hbschool.com/activity/ela2004/gr3/22.html</a></p>	<p>estimate U.S. Customary Metric length inch</p>	<p>Estimate-L2 Measure-L5 Identify-L2 Determine-</p>

	<p>units within the U.S. Customary system (inches and feet; feet and yards; inches and yards and yards and miles.) and between units within the metric system (millimeters and centimeters; centimeters and meters; and millimeters and meters) <b>(4.7b)</b></p>	<p>and U.S. Customary units.</p> <ul style="list-style-type: none"> <li>• <b>Estimate</b> the length of everyday objects (e.g., books, windows, tables) in both metric and U.S. Customary units of measure.</li> <li>• <b>Measure</b> the length of objects in both metric and U.S. Customary units, measuring to the nearest inch foot, yard, mile, millimeter, centimeter, or meter, and <b>record</b> the length including the appropriate unit of measure (e.g., 24 inches).</li> <li>• <b>Compare</b> estimates of the length of objects with the actual measurement of the length of objects.</li> <li>• <b>Identify</b> equivalent measures of length between units within the U.S. Customary measurements and between units within the metric measurements. (1/2, 1/4, 1/8) foot, yard, or mile, millimeter, centimeter, or meter, and <b>record</b> the length including the appropriate unit of measure (e.g., 24 inches).</li> <li>• <b>Compare</b> estimates of the length of objects with the actual measurement of the length of objects.</li> <li>• <b>Identify</b> equivalent measures of</li> </ul>	<p><a href="http://www.hbscho ol.com/activity/ela b2004/gr3/23.html">http://www.hbscho ol.com/activity/ela b2004/gr3/23.html</a></p> <p><a href="http://www.hbscho ol.com/activity/ela b2004/gr5/25.html">http://www.hbscho ol.com/activity/ela b2004/gr5/25.html</a></p> <p><a href="http://www.quizville.com/measuring.php">www.quizville.com/measuring.php</a></p>	<p>foot yard mile millimeter centimeter meter</p>	<p>L3 Record-L1 Compare- L4</p>
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		length between units within the U.S. Customary measurements and between units within the metric measurements.			
	<p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>Estimate and measure liquid volume and describe the results in U.S. Customary units (4.8a)</li> <li>Identify equivalent measurements between units within the U.S. Customary system (cups, pints, quarts, and gallons) (4.8b)</li> </ul>	<p>Determine an appropriate unit of measure (cups, pints, quarts, gallons) to use when measuring liquid volume in U.S. Customary units.</p> <ul style="list-style-type: none"> <li>Estimate the liquid volume of containers in U.S. Customary units of measure to the nearest cup, pint, quart, and gallon.</li> <li>Measure the liquid volume of everyday objects in U.S. Customary units, including cups, pints, quarts, and gallons, and record the volume including the appropriate unit of measure (e.g., 24 gallons).</li> <li>Identify equivalent measures of volume between units within the U.S. Customary system.</li> </ul>	<p>Va DOE Enhanced Scope and Sequence</p> <p><a href="http://www.linkslearning.org/Kids/index.html">http://www.linkslearning.org/Kids/index.html</a></p> <p><a href="http://www.hbschool.com/activity/ela_b2004/gr4/17.html">http://www.hbschool.com/activity/ela_b2004/gr4/17.html</a></p>	<p>U.S. Customary Metric estimate liquid volume cups pints quarts gallons</p>	<p>Estimate-L2 Measure-L5 Identify-L2 Determine-L3 Record-L1</p>
	<p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>The student will determine elapsed time in hours and minutes within a 12-hour period (4.9)</li> </ul>	<p>Determine the elapsed time in hours and minutes within a 12-hour period (times can cross between a.m. and p.m.).</p> <ul style="list-style-type: none"> <li>Solve practical problems in relation to time that has</li> </ul>	<p><a href="http://www.shodor.org/interactivate/">http://www.shodor.org/interactivate/</a></p> <p><a href="http://teacher.scholastic.com/maven/timemfor/index.htm">http://teacher.scholastic.com/maven/timemfor/index.htm</a></p> <p><a href="http://www.hbschool.com/activity/ela_b2004/gr3/17.html">http://www.hbschool.com/activity/ela_b2004/gr3/17.html</a></p>	<p>elapsed time</p>	<p>Determine-L3 Solve-L3</p>

		elapsed.	<a href="http://www.hbschool.com/activity/elab2004/gr4/15.html">http://www.hbschool.com/activity/elab2004/gr4/15.html</a>		
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### Bloom's Taxonomy Key

1. Level 1 (L1) – Remembering – Pink
2. Level 2 (L2) – Understanding – Blue
3. Level 3 (L3) – Applying – Green
4. Level 4 (L4) – Analyzing – Yellow
5. Level 5 (L5) – Evaluating – Gray
6. Level 6 (L6) – Creating - Red