



Topic	Concept/Goal	Skill	Activity/Resource
<p><b>Number Concepts</b></p>	<p>Develop an understanding of place value to 1,000,000 Develop understanding of positive and negative numbers Further develop an understanding of number theory</p>	<p>Read, round, write in numerical and word form Use <math>&lt;</math>, <math>&gt;</math>, and <math>=</math> to compare numbers Write numbers in expanded form Identify odd, even, prime, and composite numbers Find patterns in numbers Identify numbers less than 0 on a number line Differentiate between factors and multiples Understand dollars and cents notation</p>	<p>University of Chicago <i>Everyday Math</i> Base ten blocks to explore place value Newspaper activities to find large numbers Build a model of 1,000,000 Instruction in mathematical terminology Patterning and building arrays Academic Choice <i>Get It Together</i> logic group activities.</p>
<p><b>Computation</b></p>	<p>Understand concepts and processes of addition and subtraction Further develop and understanding of the concepts and processes of multiplication and division Understand the relationship between multiplication and division Learn checking processes for each operation Understand the function of parentheses to make true number statements Compute mentally</p>	<p>Add columns of 3- and 4- digit numbers Subtract 4-, 5-, and 6-digit numbers with regrouping Add and subtract positive/negative numbers Develop a rapid recall of the basic multiplication facts Multiply two 3-digit factors Divide using a 4-digit dividend by a 1-digit divisor Become familiar with listing multiples to solve 2-digit division problems Use checking methods: estimation and inverse operations Multiple algorithms for all operations</p>	<p>University of Chicago <i>Everyday Math</i> Nightly computation practice includes all operations that are or have been studied Building and using arrays Mini-lessons as needed Academic Choice <i>Tic-Tac-Toe</i> Math Marcy Cook Activities Math manipulatives</p>



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<p><b>Geometry &amp; Measurement</b></p>	<p>Refine spatial sense and further develop an understanding of geometric transformations Begin developing terminology required for describing the characteristics of angles and polygons Further develop an understanding of measurement of area, perimeter, volume and angles Develop and understanding of volume of polyhedrons Further develop the skill of using standard and metric measurement tools</p>	<p>Identify congruent and symmetrical shapes Distinguish between translations, rotations, and reflections Identify and describe quadrilaterals: rhombus, trapezoid, and parallelogram Identify and describe triangles: scalene, isosceles, and equilateral Identify and describe angles: acute, obtuse, right, straight, and reflex Identify and describe: polygons, rays, lines, and segments Calculate area and perimeter of rectangles and squares Find the area of a triangle using a grid Calculate the volume of cubes and rectangular prisms Measure to the nearest ¼ inch and to the nearest mm. Use protractors to measure angles</p>	<p>University of Chicago <i>Everyday Math</i> <i>Geometry With Pattern Blocks</i> Transparent mirror activities Tangram activities Symmetrical portraits Protractors and compasses Academic Choice <i>Get It Together</i> logic group activities. Marcy Cook activities Math and Music Geoboard and graph paper activities</p>
<p><b>Statistics, Graphing, &amp; Probability</b></p>	<p>Begin to develop an understanding of when to use the various graphs Further develop an understanding of how graphs are made and read Begin to develop an understanding of line plots Develop skills for predicting and testing frequency of possible outcomes</p>	<p>Make and read circle graphs, line graphs, and bar graphs showing collected data Build and analyze a line plot finding its range, mode, median, and mean Predict, experiment, develop ratios; interpret results of probability</p>	<p>University of Chicago <i>Everyday Math</i> Small group graphing activities Make computer generated graphs Academic Choice <i>Get It Together</i> logic group activities.</p>

Mathematics – Fourth Grade

University School of  
Nashville



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<p><b>Fractions, Decimals, &amp; Percents</b></p>	<p>Understand that fractions and decimals represent parts of a whole                      Further develop an understanding of equivalent fractions                      Develop methods for comparing fractions                      Compute with fractions                      Understand the relationship between fractions and division                      Understand decimal notation; relate 10ths and 100ths to fractions                      Compute with decimals</p>	<p>Write fractions representing shaded parts of pictures, find fractional parts of a whole with manipulatives                      Write equivalent fractions through patterning or using manipulatives                      Order and compare fractions and decimals using manipulatives and/or charts                      Change decimals to percents                      Add and subtract like fractions                      Change improper fractions to mixed numbers                      Read and write decimals to the 100ths                      Change fractions to decimals using a calculator                      Add and subtract (2-digit) decimals given horizontally</p>	<p>University of Chicago <i>Everyday Math</i>                      Academic Choice  <i>Tic-Tac-Toe</i> Math                      Marcy Cook Activities  <i>Get It Together</i> logic group activities.</p>
<p><b>Problem Solving</b></p>	<p>Understand what information is needed to solve a problem                      Develop strategies for solutions</p>	<p>Locate needed information in pictures, maps, graphs, charts and tables                      Solve number stories (addition, subtraction, multiplication, and division)                      Make diagrams, use math sense, plan solutions, guess &amp; check, take notes and use simpler numbers</p>	<p>University of Chicago <i>Everyday Math</i>                      Logic games, chess, Marcy Cook problem-solving activities, Academic Choice, &amp; <i>Get It Together</i> logic group activities.</p>
<p><b>Technology</b></p>	<p>Develop greater understanding of calculators and computers in problem solving</p>	<p>Use calculators for computation and changing fractions to decimals                      Make charts, graphs, tables using the computer</p>	<p>University of Chicago <i>Everyday Math</i>  <i>FX300ES</i> Calculator and materials                      A variety of computer software in the computer lab                      The 4<sup>th</sup> Grade Tech Curriculum</p>