THE UNIVERSITY OF CHICAGO SCHOOL MATHEMATICS PROJECT

EVERYDAY MATHEMATICS

GRADE 3 GRADE-LEVEL GOALS

Content Strand: Number and Numeration			
Grade-Level Goals		**Content Thread**	**Program Goal**
Goal 1	Read and write whole numbers up to 1,000,000; read, write, and model with manipulatives decimals through hundredths; identify places in such numbers and the values of the digits in those places; translate between whole numbers and decimals represented in words, in base-10 notation, and with manipulatives.	*Place value and notation*	Understand the Meanings, Uses, and Representations of Numbers
Goal 2	Read, write, and model fractions; solve problems involving fractional parts of a region or a collection; describe strategies used.	*Meanings and uses of fractions*	
Goal 3	Find multiples of 2, 5, and 10.	*Number theory*	
Goal 4	Use numerical expressions involving one or more of the basic four arithmetic operations to give equivalent names for whole numbers.	*Equivalent names for whole numbers*	Understand Equivalent Names for Numbers
Goal 5	Use manipulatives and drawings to find and represent equivalent names for fractions; use manipulatives to generate equivalent fractions.	*Equivalent names for fractions, decimals, and percents*	
Goal 6	Compare and order whole numbers up to 1,000,000; use manipulatives to order decimals through hundredths; use area models and benchmark fractions to compare and order fractions.	*Comparing and ordering numbers*	Understand Common Numerical Relations

Content Strand: Operations and Computation			
Grade-Level Goals		**Content Thread**	**Program Goal**
Goal 1	Demonstrate automaticity with all addition and subtraction facts through 10 + 10; use basic facts to compute fact extensions such as 80 + 70.	*Addition and subtraction facts*	Computes Accurately
Goal 2	Use manipulatives, mental arithmetic, paper-and-pencil algorithms, and calculators to solve problems involving the addition and subtraction of whole numbers and decimals in a money context; describe the strategies used and explain how they work.	*Addition and subtraction procedures*	
Goal 3	Demonstrate automaticity with x0, x1, x2, x5, and x10 multiplication facts; use strategies to compute remaining facts up to 10 x 10.	*Multiplication and division facts*	
Goal 4	Use arrays, mental arithmetic, paper-and-pencil algorithms, and calculators to solve problems involving the multiplication of 2- and 3-digit whole numbers by 1-digit and describe the strategies used.	*Multiplication and division procedures*	
Goal 5	Make reasonable estimates for whole number addition and subtraction problems; explain how the estimates were obtained.	*Computational estimation*	Make Reasonable Estimates
Goal 6	Recognize and describe change, comparison, and parts-and-total situations; use repeated addition, arrays, and skip counting to model multiplication; use equal sharing and equal grouping to model division.	*Models for the operations*	Understand Meanings of Operations

Content Strand: Data and Chance			
Grade-Level Goals		**Content Thread**	**Program Goal**
Goal 1	Collect and organize data or use given data to create charts, tables, bar graphs, and line plots.	*Data collection and representation*	Select and Create Appropriate Graphical Representations of Collected or Given Data
Goal 2	Use graphs to ask simple questions and draw conclusions; find the maximum, minimum, range, mode, and median of a data set.	*Data analysis*	Analyze and Interpret Data
Goal 3	Describe events using *certain*, *very likely*, *likely*, *unlikely*, *very unlikely*, *impossible* and other basic probability terms; explain the choice of language.	*Qualitative probability*	Understand and Apply Basic Concepts of Probability
Goal 4	Predict the outcomes of simple experiments and test the predictions using manipulatives; express the probability of an event by using "_ out of _" language.	*Quantitative probability*	

Content Strand: Measurement and Reference Frames			
Grade-Level Goals		**Content Thread**	**Program Goal**
Goal 1	Estimate length with and without tools; measure length to the nearest ½ inch and ½ centimeter; draw and describe angles of records of rotations.	*Length, weight, and angles*	Understand the Systems and Processes of Measurement; Use Appropriate Techniques, Tools, Units, and Formulas in Making Measurements
Goal 2	Describe and use strategies to measure the perimeter of polygons; count unit squares to find the areas of rectangles.	*Area, perimeter, volume, and capacity*	
Goal 3	Describe relationships among inches, feet, and yards; describe relationships between minutes in an hour, hours in a day, days in a week.	*Units and systems of measurement*	
Goal 4	Tell and show time to the nearest minute on an analog clock; tell and write time in digital notation.	*Time*	Use and Understand Reference Frames

Content Strand: Geometry			
Grade-Level Goals		**Content Thread**	**Program Goal**
Goal 1	Identify and draw points, intersecting and parallel line segments, and lines, rays, and right angles.	*Lines and angles*	Investigate Characteristics and Properties of Two- and Three-Dimensional Geometric Shapes
Goal 2	Identify, describe, model, and compare plane and solid figures including circles, polygons, spheres, cylinders, rectangular prisms, pyramids, cones, and cubes using appropriate geometric terms including the terms *face*, *edge*, *vertex,* and *base*.	*Plane and solid figures*	
Goal 3	Create and complete two-dimensional symmetric shapes or designs; locate multiple lines of symmetry in a two-dimensional shape.	*Transformations and symmetry*	Apply Transformations and Symmetry in Geometric Situations

Content Strand: Patterns, Functions, and Algebra			
Grade-Level Goals		**Content Thread**	**Program Goal**
Goal 1	Extend, describe, and create numeric patterns; describe rules for patterns and use them to solve problems; use words and symbols to describe and write rules for functions involving addition, subtraction, and multiplication and use those rules to solve problems.	*Patterns and functions*	Understand Patterns and Functions
Goal 2	Read, write, and explain number sentences using the symbols +, – , x, ÷, =, >, and <; solve number sentences, write expressions and number sentences to model number stories.	*Algebraic notation and solving number sentences*	Use Algebraic Notation to Represent and Analyze Situations and Structures
Goal 3	Recognize that numeric expressions can have different values depending on the order in which operations are carried out; understand that grouping symbols can be used to affect the order in which operations are carried out.	*Order of operations*	
Goal 4	Describe and apply the Commutative and Associative Properties of Addition, the Commutative Property of Multiplication, and the Multiplicative Identity.	*Properties of the arithmetic operations*	