Third Grade

Standard	Everyday Math Goal	Ohio Benchmark
Number, Number Sense, and Operations *(Benchmarks F and G are not EM goals in grades 3-4, but are in grades K-2)*	**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.	A. Use place value structure of the base-ten number system to read, write, represent and compare whole numbers and decimals.
Number, Number Sense, and Operations	**Goal 2.** Read, write, and model fractions; solve problems involving fractional parts of a region or a collection; describe strategies used.	C. Represent commonly used fractions and mixed numbers using words and physical models. D. Use models, points of reference and equivalent forms of commonly used fractions to judge the size of fractions and to compare, describe and order them.
Number, Number Sense, and Operations	**Goal 3.** Find multiples of 2, 5, and 10.	none
Number, Number Sense, and Operations	**Goal 4.** Use numerical expressions involving one or more of the basic four arithmetic operations to give equivalent names for whole numbers.	B. Recognize and generate equivalent representations for whole numbers, fractions and decimals.
Number, Number Sense, and Operations	**Goal 5.** Use manipulatives and drawings to find and represent equivalent names for fractions; use manipulatives to generate equivalent fractions.	B. Recognize and generate equivalent representations for whole numbers, fractions and decimals.
Number, Number Sense, and Operations	**Goal 6.** Compare and order whole numbers up to 1,000,000; use manipulatives to order decimals	A. Use place value structure of the base-ten number system to read, write, represent and compare whole numbers

	through hundredths; use area models and benchmark fractions to compare and order fractions.	and decimals. D. Use models, points of reference and equivalent forms of commonly used fractions to judge the size of fractions and to compare, describe and order them.
Number, Number Sense, and Operations	Demonstrate automaticity with all addition and subtraction facts through 10 + 10; use basic facts to compute fact extensions such as 80 + 70.	Grades K-2
Number, Number Sense, and Operations	**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.	K. Analyze and solve multi-step problems involving addition, subtraction, multiplication and division of whole numbers. L. Use a variety of methods and appropriate tools (mental math, paper and pencil, calculators) for computing with whole numbers.
Number, Number Sense, and Operations	**Goal 3.** Demonstrate automaticity with x0, x1, x2, x5, and x10 multiplication facts; use strategies to compute remaining facts up to 10 x 10.	I. Demonstrate fluency in multiplication facts with factors through 10 and corresponding divisions.
Number, Number Sense, and Operations	**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 whole numbers; describe the strategies used.	K. Analyze and solve multi-step problems involving addition, subtraction, multiplication and division of whole numbers. L. Use a variety of methods and appropriate tools (mental math, paper and pencil, calculators) for computing with whole numbers.
Number, Number Sense,	**Goal 5**. Make reasonable estimates for whole number	J. Estimate the results of whole number computations using a variety of strategies,

and Operations	addition and subtraction problems; explain how the estimates were obtained.	and judge the reasonableness.
Number, Number Sense, and Operations	**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.	H. Use relationships between operations, such as subtraction as the inverse of addition and division as the inverse of multiplication. I. Demonstrate fluency in multiplication facts with factors through 10 and corresponding divisions.
Measurement *(Benchmark B not an EM goal)*	**Goal 1.** Estimate length with and without tools; measure length to the nearest ½ inch and ½ centimeter; draw and describe angles as records of rotations.	C. Develop common referents for units of measure for length, weight, volume (capacity) and time to make comparisons and estimates.
Measurement	**Goal 2.** Describe and use strategies to measure the perimeter of polygons; count unit squares to find the areas of rectangles.	D. Identify appropriate tools and apply counting techniques for measuring side lengths, perimeter and area of squares, rectangles, and simple irregular two-dimensional shapes, volume of rectangular prisms, and time and temperature.
Measurement	**Goal 3.** Describe relationships among inches, feet, and yards; describe relationships between minutes in an hour, hours in a day, days in a week.	A. Select appropriate units for perimeter, area, weight, volume (capacity), time and temperature, using: • objects of uniform size; • U.S. customary units; e.g., mile, square inch, cubic inch, second, degree Fahrenheit, and other units as appropriate; • metric units; e.g., millimeter, kilometer, square centimeter, kilogram, cubic centimeter, degree Celsius, and other units as appropriate.

Measurement	**Goal 4.** Tell and show time to the nearest minute on an analog clock; tell and write time in digital notation.	E. Tell time to the nearest minute
Geometry and Spatial Sense	**Goal 1.** Identify and draw points, intersecting and parallel line segments and lines, rays, and right angles.	B. Describe and identify points, lines and planes in the environment. C. Describe and identify intersecting, parallel and perpendicular lines or segments in the environment. D. Identify and draw right, obtuse, acute and straight angles.
Geometry and Spatial Sense	**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*.	A. Provide rationale for groupings and comparisons of two-dimensional figures and three-dimensional objects. E. Use attributes to describe, classify and sketch plane figures and build solid objects. F. Develop definitions of classes of shapes.
Geometry and Spatial Sense	**Goal 3.** Create and complete two dimensional symmetric shapes or designs; locate multiple lines of symmetry in a two-dimensional shape.	H. Identify and describe line and rotational symmetry in two-dimensional shapes and designs
Patterns, Functions, and Algebra *(Benchmarks F and G are not EM goals)*	**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.	A. Analyze and extend patterns, and describe the rule in words. B. Use patterns to make predictions, identify relationships, and solve problems. C. Write and solve open sentences and explain

		strategies. D. Represent an unknown quantity as a variable using a symbol, including letters. E. Use variables to create and solve equations representing problem situations.
Patterns, Functions, and Algebra	**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.	C. Write and solve open sentences and explain strategies. D. Represent an unknown quantity as a variable using a symbol, including letters. E. Use variables to create and solve equations representing problem situations.
Patterns, Functions, and Algebra	**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.	none
Patterns, Functions, and Algebra	**Goal 4.** Describe and apply the Commutative and Associative Properties of Addition, the Commutative Property of Multiplication, and the Multiplicative Identity.	Grades K-2
Data Analysis and Probability *(Benchmark D is not an EM goal)*	**Goal 1.** Collect and organize data or use given data to create charts, tables, bar graphs, and line plots.	A. A. Gather and organize data from surveys and classroom experiments, including data collected over a period of time. B. Read and interpret tables, charts, graphs (bar, picture, line, line plot), and

		timelines as sources of information, identify main idea, draw conclusions, and make predictions. C. Construct charts, tables and graphs to represent data, including picture graphs, bar graphs, line graphs, line plots and Venn diagrams.
Data Analysis and Probability	**Goal 2.** Use graphs to ask and answer simple questions and draw conclusions; find the maximum, minimum, range, mode, and median of a data set.	B. Read and interpret tables, charts, graphs (bar, picture, line, line plot), and timelines as sources of information, identify main idea, draw conclusions, and make predictions. E. Describe data using mode, median and range.
Data Analysis and Probability	**Goal 3.** Describe events using *certain, very likely, likely, unlikely, very unlikely, impossible,* and other basic probability terms; explain the choice of language.	F. Conduct a simple probability experiment and draw conclusions about the likelihood of possible outcomes.
Data Analysis and 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.	G. Identify and represent possible outcomes, such as arrangements of a set of up to four members and possible combinations from several sets, each containing 2 or 3 members. H. Use the set of possible outcomes to describe and predict events.