

GRADE THREE

Number and Numeration

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.

Goal 2: Read, write, and model fractions; solve problems involving fractional parts of a region or a collection; describe strategies used.

Goal 3: Find multiples of 2, 5, and 10.

Goal 4: Use numerical expressions involving one or more of the basic four arithmetic operations to give equivalent names for whole numbers.

Goal 5: Use manipulatives and drawings to find and represent equivalent names for fractions; use manipulatives to generate equivalent fractions.

Goal 6: Compare and order whole number up to 1,000,000; use manipulatives to order decimals through hundredths; use area models and benchmark fractions to compare and order fractions.

Operations and Computation

Goal 1: Demonstrate automaticity with all addition and subtraction facts through 10+10; use basic facts to compute fact extensions such as 80+70.

Goal 2: Use manipulatives, mental arithmetic, paper-and-pencil algorithms and models, 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.

Goal 3: Demonstrate automaticity with multiplication facts through 10x10.

Goal 4: Use arrays, mental arithmetic, paper-and-pencil algorithms and models, and calculators to solve problems involving the multiplication of 2-and3-digit whole numbers by 1 digit whole numbers; describe the strategies used.

Goal 5: Make reasonable estimates for whole number addition, subtraction, multiplication, and division problems; explain how the estimates were obtained.

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.

Data and Chance

Goal 1: Collect and organize data or use given data to create charts, tables, graphs, and line plots.

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.

Goal 3: Describe events using certain, very likely, likely, unlikely, very unlikely, impossible and other basic probability terms; explain the choice of language.

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.

Measurement and Reference Frames

Goal 1: Estimate length with and without tools; measure length to the nearest $\frac{1}{2}$ inch and $\frac{1}{2}$ centimeter; draw and describe angles as records of rotations.

Goal 2: Describe and use strategies to measure the perimeter of polygons; find the areas of rectangles.

Goal 3: Describe relationships among inches, feet, and yards; describe relationships between minutes in an hour, hours in a day, days in a week.

Goal 4: Tell and show time to the nearest minute on an analog clock; tell and write time in digital notation.

Geometry

Goal 1: Identify and draw points, intersecting and parallel line segments and lines, rays, and right angles.

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.

Goal 3: Create and complete two-dimensional symmetric shapes or designs; locate multiple lines of symmetry in a two-dimensional shape.

Patterns, Functions, and Algebra

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.

Goal 2: Read, write, and explain number sentences using the symbols $+, -, \times, =, >, <$; solve number sentences; write expressions and number sentences to model number stories.

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.

Goal 4: Describe and apply the Commutative and Associative Properties of Addition and Multiplication and the Multiplicative Identity; apply the Distributive Property of Multiplication over Addition.