

ELEMENTARY MATH PROJECT
Grade 5

Year at a Glance

The following overview of the year is a suggested plan for grade 5 mathematics taking into consideration introducing new concepts in the first half of the year so there is time for spacing learning experiences over the year as well as balancing each term with number concepts and computational fluency alongside other areas of math.

Term One Mathematics Learning Standards
Number concepts to 1 000 000 (understanding of place value with hundreds and tens of thousands, hundreds, tens and ones, writing and reading numbers to 1 000 000)
Addition and Subtraction (review and practice facts to 20 with increasing fluency using flexible strategies with recall of many facts; addition and subtraction to 1 000 000 multiple strategies using both mental math and symbolic notation)
Multiplication and division facts to 100 (emerging computational fluency through mental math strategies such as number patterns, skip counting/multiples, decomposing, using known facts; develop fluency with 2x, 5x and 10x questions; practice through routines, apps such as Multiples and math games)
Multiplication and division (review of two or three-digit numbers by one-digit numbers (using skip counting, decomposing, repeated addition or subtraction, concrete materials or pictures, use of arrays; problem solving)
Fractions (review of fraction concepts including tenths, hundredths, comparing and ordering fractions along a number line)
Decimal numbers (to thousandths; connecting to place value and fraction understanding)
Communicating and Representing curricular competencies
Double bar using one-to-one and many-to-one correspondence (use of key or legend to indicate many-to-one relationship; collect data, represent data in tables, graphing data, comparing and interpreting data)

Probability experiments (predict and test the results of single event or outcome experiments such as rolling a die, spinning one spinner, tossing a coin; predict results, conduct experiments (ie 10 rolls of a die), record results with tally marks/graph)

Term Two Mathematics Learning Standards

Number concepts to 1 000 000 (decomposition of and flexibility with quantities to 1 000 000, counting fluently in different ways to 1 000 000 comparing and ordering numbers to 1 000 000 using benchmark numbers)

Addition and Subtraction (facts to 20 with extending fluency – increased flexibility and using known facts to solve unknown facts, applying understanding of facts to 20 to greater numbers; addition and subtraction to 1 000 000 using multiple mental math and computational strategies with symbolic notation, problem solving with numbers to 1 000 000)

Decimal addition and subtraction (review to tenths and hundredths and then to thousandths, connect to whole number addition and subtraction strategies such as decomposing, compensating, adding up to find the difference)

Multiplication and division facts to 100 (emerging computational fluency through mental math strategies such as number patterns, skip counting/multiples, decomposing, using known facts; develop fluency with 2x, 3x,5x and 10x questions; practice through routines, apps such as Multiples and math games)

Multiplication and division of three-digit numbers by two or three-digit numbers (using decomposing, distributive and commutative properties, repeated addition or subtraction, use of arrays, division questions with remainders, problem solving)

Equivalent fractions (building and comparing equivalent fractions using concrete materials, pictures and symbols; greater than, less than, placing on a number line, using fraction and decimal benchmarks, explaining and justifying decisions)

Reasoning and Analyzing and Understanding and Solving curricular competencies

One-step equations (connect to number patterns, solving for an unknown in equations such as $8 + n = 12$ using all four operations)

Duration, using measurement of time (problem solving tasks measuring elapsed time and duration of time)

Single transformations (single object/shape movement concretely/visually– slide/translation, flip/reflection, turn/rotation)

Increasing and decreasing patterns (represent patterns rules using words, numbers, symbols and variables; expressions)

Term Three Mathematics Learning Standards

Number concepts to 1 000 000 (fluency with numbers to 1 000 000 and place value understanding)

Addition and Subtraction (facts to 20 with extending fluency – increased flexibility and using known facts to solve unknown facts, applying understanding of facts to 20 to greater numbers; addition and subtraction to 1 000 000 using multiple mental math and computational strategies with symbolic notation; problem solving with numbers to 1 000 000)

Decimal addition and subtraction (to thousandths, connect to whole number addition and subtraction strategies such as decomposing, compensating, adding up to find the difference)

Multiplication and division facts to 100 (emerging computational fluency through mental math strategies such as number patterns, skip counting/multiples, decomposing, using known facts; develop fluency with 2x, 3x, 4x, 5x and 10x questions; practice through routines, apps such as Multiples and math games)

Multiplication and division of three-digit numbers by two or three-digit numbers (using decomposing, distributive and commutative properties, repeated addition or subtraction, use of arrays, division questions with remainders, problem solving)

Equivalent fractions & Decimals (connecting fraction & decimal concepts, comparing and ordering, different representations)

Connecting and Reflecting curricular competencies

Classification of prisms and pyramids (attributes of 2D shapes as part of prisms and pyramids, investigating quadrilaterals, describing, comparing and identifying prisms and pyramids, constructing different based pyramids and rectangular and triangular prisms)

Area measurement of squares and rectangles (use rulers, measuring tapes, geoboards or grids to create and measure the area of squares and rectangles; connect to multiplicative relationship; investigate relationship between area and perimeter)

Financial literacy – monetary calculations including making change to \$1000 and developing simple financial plans (mental math including decomposing strategies to make change/find the difference, record financial calculations using decimal numbers, use simulations, make plans using charts or tables and explain and justify choices or decisions)