COASTMETRO

ELEMENTARY MATH PROJECT

Grade 4

Year at a Glance

The following overview of the year is a suggested plan for grade 4 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 10 000 (understanding of place value with thousands, hundreds, tens and ones, writing and reading numbers to 10 000)
Addition and Subtraction (review and practice facts to 20 with increasing fluency; addition and subtraction to 10 000 using mental math and computational strategies with symbolic notation)
Multiplication and division facts to 100 (begin to introduce computational and mental math strategies such as number patterns, skip counting, using known facts; develop fluency with 2x, 5x and 10x questions)
Multiplication and division of two-digit numbers by one-digit numbers (using skip counting, decomposing, repeated addition or subtraction, concrete materials or pictures, use of arrays)
Fractions (review of fraction concepts including tenths)
Introduction to decimal numbers (tenths and hundredths; connecting fraction understanding; concrete, pictorial and symbolic representation using ten frames, hundred grids, base ten blocks)
Communicating and Representing curricular competencies
Bar graphs and pictographs 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, interpreting data)

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

Term Two Mathematics Learning Standards
Number concepts to 10 000 (decomposition of quantities to 10 000, counting fluently in different ways to 10 000 comparing and ordering numbers to 10 000)
Addition and Subtraction (review and practice facts to 20 with increasing fluency; addition and subtraction to 10 000 using mental math and computational strategies with symbolic notation)
Decimal addition and subtraction (tenths, connect to whole number addition and subtraction strategies such as decomposing, compensating, adding up to find the difference)
Multiplication and division facts to 100 (practice mental math strategies such as number patterns, using known facts – for examples using 5x to figure out 7x; develop fluency with 2x, 5x and 10x questions)
Multiplication and division of two or three-digit numbers by one-digit numbers (using decomposing, distributive and commutative properties, repeated addition or subtraction, use of arrays, problem solving)
Fractions (comparing and ordering fractions using concrete materials, pictures and symbols; placing on a number line, explaining and justifying decisions)
Reasoning and Analyzing and Understanding and Solving curricular competencies
Algebraic relationships and one-step equations (connect to number patterns, solving for an unknown in equations such as 8 + n =12 using all four operations)
Telling time (analog and digital, 12 and 24 hour notation; am/pm, connect to fractions for quarter to/past, half-past, tell time to 5 minute and 1 minute intervals)
Line symmetry (find and describe line symmetry in objects, art, the natural world; create designs with line/reflective, mirror symmetry, indicate line/s of symmetry)
Increasing and decreasing patterns (represent patterns with concrete materials, pictures, words and symbols, identify pattern unit/rule, record patterns in tables and charts, connect number patterns to operations)

Term Three Mathematics Learning Standards
Number concepts to 10 000 (fluency with numbers to 10 000 and place value understanding)
Addition and Subtraction (review and practice facts to 20 with increasing fluency; addition and subtraction to 10 000 using mental math and computational strategies with symbolic notation)
Decimal addition and subtraction (tenths and hundredths, connect to whole number addition and subtraction strategies such as decomposing, compensating, adding up to find the difference)
Multiplication and division facts to 100 (practice mental math strategies such as number patterns, using known facts – for examples using 5x to figure out 7x; develop fluency with 2x, 5x and 10x questions)
Multiplication and division of three-digit numbers by one-digit numbers (using decomposing, distributive and commutative properties, repeated addition or subtraction, use of arrays, problem solving)
Fractions and Decimals (connecting fraction and decimal concepts, comparing and ordering)
Connecting and Reflecting curricular competencies
Polygons (regular and irregular; sort and describe polygons, attributes, names such as hexagon)
Perimeter of regular and irregular shapes (use rulers, measuring tapes, geoboards or grids to create and measure the distance around regular and irregular shapes
Financial literacy – monetary calculations and simple financial decisions (making change from amounts up to $100, counting or decomposing strategies to make change/find the difference, practice with pretend coins and bills and record symbolically using decimal numbers, using simulations, solve problems or make decisions or choices involving earning, spending, saving and giving)