Grade Five Year Overview

Grade Five Year Overview: Mathematics and Numeracy

Term One Mathematics Learning Standards	Numeracy Connections
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)	What is numeracy? Where do we use math in our lives and in other areas of learning? Creating, reading and interpreting graphs and visual information, connected to other areas of learning or school and community events.
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	Numeracy Connections
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)	What is numeracy? Where do we use math in our lives and in other areas of learning? Fair Share numeracy task such as: The playground is available to students to use for 15 minutes at recess and 30 minutes at lunch. For safety reasons, a maximum of 75 students can use it at a time and there are 250 students at the school. How could time on the playground be shared fairly? What might you need to consider?
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	Numeracy Connections
Number concepts to 1 000 000 (fluency with numbers to 1 000 000 and place value understanding)	What is numeracy? Where do we use math in our lives and in other areas of learning? Plan and Design numeracy task such as: Plan and design a garden that will be a pumpkin patch in the fall. How much space does each pumpkin plant need? How many pumpkins do you want to have? What other things do you need to consider?
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)	