Grange Primary School
Year 6 Maths Curriculum Coverage

Autumn

Chapter 1 – Numbers to 10 Million

To create and identify numbers to 10 000 000; to write in numerals and words numbers to 10 000 000.
To construct and record numbers to 10 000 000; to recognise the value of digits to 10 000 000.
To recognise and construct numbers to 10 000 000 using an abacus; to recognise the value of digits in numbers to 10 000 000 and write numbers using numerals and words.
To compare numbers to 10 000 000 using place value.
To compare and order numbers to 10 000 000; to create combinations of numbers using a fixed number of digits.
To round numbers to 10 000 000 to the nearest million, hundred thousand and ten thousand.
To round numbers to the nearest appropriate number up to and including millions; to determine when rounding is appropriate and to which value.

Chapter 2 – Four Operations on Whole Numbers

To use multiple operations and create expressions from a picture; to use the order of operations to solve expressions.
To create and solve expressions using the 4 operations.
To multiply numbers by multiples of 10; to use number bonds as a key strategy in multiplication.
To multiply 3- and 4-digit numbers by 2-digit numbers without regrouping or renaming; to use both number bonds and the column method as key strategies.
To multiply 3- and 4-digit numbers by 2-digit numbers without regrouping or renaming; to use both number bonds and the column method as key strategies.
To multiply 3- and 4-digit numbers by 2-digit numbers with regrouping and renaming; to use number bonds and pattern recognition as key strategies for multiplication.
To multiply 3- and 4-digit numbers by 2-digit numbers with regrouping and renaming; to use number bonds and the column method as key strategies.
To estimate products of multiplying 3- and 4-digit numbers by a 2-digit numbers; to use knowledge of multiplication to create specific products.
To divide 3-digit numbers by 2-digit numbers using a variety of strategies; to use number bonds, long division and bar models to facilitate division by 2-digit numbers.
To divide 4-digit numbers by 2-digit numbers; to use number bonds and long division as the key strategies.
To divide 4-digit numbers by 2-digit numbers using a variety of methods; to use number bonds, long and short division as key methods.
To divide 3-digit numbers by 2-digit numbers giving rise to remainders; to use number bonds, long and short division as key strategies to solve division problems.
To divide 4-digit numbers by 2-digit numbers giving rise to remainder; to represent the remainder as part of a whole amount of money or decimal.
To use the bar model heuristic to solve word problems involving multiplication and division.
To solve word problems using division as the main strategy; using pictorial representations to support word problems.
To solve word problems involving multiple operations, including multiplication and division.
To find common multiples in real life situations; to use common multiples in tandem with knowledge of time.
To use common multiples to solve problems; to organise mathematial thinking in to tables and lists.
To find the largest common factor of 3-digit numbers; to use multiplication and division to find largest common factors.
To find common factors using concrete materials.
To use prime numbers to create other numbers; to explore prime numbers above 100.
To explore prime numbers using concrete materials; to identify prime numbers using multiplication or division.

Chapter 3 – Fractions

To use concrete materials to simplify fractions; to recognise equivalence in fractions to 1 quarter.
To simplify fractions using division and common factors; to represent fractions using concrete materials and pictorial representations.
To compare fractions and place them in order from smallest to largest.
To compare and order fractions by finding common denominators.
To compare and order fractions using common factors.
Adding and subtracting fractions with different denominators; using pictorial representations to compare fractions and add/subtract.
To add and subtract fractions of different denominators; to develop questions and word problems based on in formation provided
To add and subtract fractions with different denominators.

To add and subtract mixed numbers, including fractions with different denominators; to subtract from the whole and add the remainder back on.
To add and subtract fractions with different denominators; to add and subtract mixed numbers.
To multiply fractions using pictorial representations and abstract methods.
To determine of the commutative law applies to fractions; to multiply fractions using concrete materials and pictorial representations.
To use concrete materials to understand and solve the multiplication of fractions; to simplify equations using pattern blocks.
To divide a fraction by a whole number; to use pictorial representation to divide whole numbers into fractions.
To divide fractions by whole numbers using concrete materials and pictorial representations; to divide fractions when the numerator and divisor are not easily divisible.
To divide fractions by a whole number; to use pictorial representations to support division.

Chapter 4 – Decimals

To read and write decimals to thousandths; to use concrete materials to represent decimals.
To divide whole numbers by larger whole numbers; to use base ten materials to represent tenths, hundredths and thousandths.
To divide whole numbers that give rise to decimals; calculate decimal fraction equivalents using long division.
To convert fractions into decimals using bar models and long division.
To write fractions as decimals; to use long division as the key strategy for turning fractions in to decimals.
To multiply decimals by whole numbers using partitioning or the worded method to help find the solution.
To multiply whole numbers that include a decimal by other whole numbers; to use partitioning and the worded method as key strategies.
To multiply decimals by whole numbers including regrouping and renaming.
To multiply decimals by whole numbers using a variety of methods; to use the heuristic 'making a list' to help solve a problem.
To divide decimals using number bonds and number discs as the key strategies.
To divide decimals using bar models, number bonds and long division as key strategies, including regrouping and renaming.
To multiply decimals by a 2-digit whole number using number discs and the column method.
To divide decimals by 2-digit numbers using number bonds and the worded method.
To divide decimals by 2-digit whole numbers using number bonds and the worded method.

Chapter 5 – Measurements

To convert common measurements into m, cm, and mm.
To convert units of measure into different units; to use knowledge of decimals and fractions to help convert units.
To convert meters into kms as units of measure.
To convert units of mass from g to kg using decimals and fractions.
To convert units of volume from ml to l.
To convert units of time from min to h; to represent time using 24-hour notation.

Spring

Chapter 6 – Word Problems

To use bar models to solve word problems involving the 4 operations.
To use the bar model heuristic to solve word problems involving the 4 operations.
To use the bar model heuristic to solve complex word problems involving time.
To solve complex word problems using pictorial representation and the 4 operations.
To create and solve word problems that apply the bar model heuristic and working backwards as the main strategies.
To create and solve complex word problems using the 4 operations.

Chapter 7 – Percentage

To find the percentage of a whole number using division and multiplication; to use bar modelling as a pictorial approach to calculating percentage.
To find the percentage of a quantity; to use bar model diagrams to support the division and multiplication of numbers towards the percentage.
To find the percentage change in an amount over time; to calculate the percentage change where the number gives rise to a decimal.
To use percentage, bar models and fractions to compare amounts.

Chapter 8 – Ratio

Comparing Quantities

Comparing Numbers
Solving Word Problems

Chapter 9 – Algebra

To determine a pattern using concrete materials and pictorial representation; to use a table to identify a repeating pattern; to express a rule using a letter or a symbol.
To determine a pattern using concrete materials and pictorial representation; to use a table to identify a repeating pattern; to express the relationship between consecutive numbers in terms of a symbol or a letter.
To determine a pattern using concrete materials and pictorial representation; to use a table to identify a pattern; to express the relationship between consecutive numbers in terms of a symbol or letter.
To determine a pattern using concrete materials and pictorial representation; to use a table to identify a pattern; to express unknown numbers in terms of a letter or a symbol, including using a number before a letter for multiplication.
To use a table to identify a pattern; to write algebraic expressions using each of the four operations.
To use examples to identify rules; to write algebraic expressions using each of the four operations; to evaluate algebraic expressions including the use of inverse operations.
To recognise patterns; to write algebraic expressions with two steps; to evaluate algebraic expressions with two steps.
To recognise patterns; to write and evaluate algebraic expressions with two steps; to write and use formulae.
To use formulae to solve problems; to replace a letter/variable with a number then solve the equation; to use inverse operations to solve equations.
To solve equations; to use equations to find unknown values.

Chapter 10 – Area and Perimeter

To find the area and perimeter of rectangles; to calculate perimeter using the known area and vice versa.
To find and calculate the area of a parallelogram; to use concrete materials and prior understanding of area to construct a formula for the area.
To use prior knowledge of area to determine and solve the area of a triangle; to use and apply the
To calculate the area of a triangle using a formula; to calculate the area of a triangle in multiple ways.
To use multiple methods to solve the area of a triangle.
To find the area of a parallelogram using an understanding of triangles; to use concrete materials to solve for the area of a parallelogram.

Summer

Chapter 11 – Volume

To find the volume of cubes and cuboids using concrete materials.
To determine the formula for the volume of cubes and cuboids and apply it to calculate the volume of shapes.
To estimate the volume of objects and spaces; to calculate the volume of boxes using the formula for volume of cubes and cuboids.
To calculate the volume of boxes using the formula for volume of a cube; to expose common misconceptions in volume through a 3-box arrangement.
To solve word problems involving the volume of cubes and cuboids; to apply the formula for the volume of a cube or cuboid.

Chapter 12 – Geometry

To investigate opposite angles as the same; to use prior knowledge of angles to solve problems involving angles.
To solve problems involving angles using the bar model heuristic; to solve problems involving angles without protractors.
To determine and show the sum of the angles inside a triangle.
To investigate and determine angles in quadrilaterals.
To use the knowledge of angles inside a triangle and a quadrilateral to solve problems involving angles in other shapes.
To name the parts of a circle; to calculate diameter and radius using parts of a circle.
To solve problems involving angles in a circle.
To draw quadrilaterals with specific side lengths and parallel lines; to find the perimeter of shapes and name trapeziums and parallelograms.
To draw triangles using measurements and angles as the starting point; to use a protractor to draw triangles using angles.
To construct triangles using a protractor and ruler; to use ratio to determine the dimensions of a triangle.
To construct the nets of 3-D shapes by identifying the faces and the 2-D shapes that construct them.
To construct the nets of 3-D shapes by identifying the faces and the 2-D shapes that construct them.

Chapter 13 – Position and Movement

Showing Negative Numbers
Describing Position
Describing Position

Drawing Polygons on a Coordinate Grid
Describing Translations
–Describing Reflections
Describing Movements
Describing Movements
Using Algebra to Describe Position
Using Algebra to Describe Movements

Chapter 14 – Graphs and Averages

To calculate the average (mean) of sets of values.
To calculate the mean.
To calculate the mean.
To solve problems involving the mean; use the mean and the number of values to calculate the total; use given information to find unknown values.
To show information on graphs; to transfer information from a table to a pie chart.
To read and interpret pie charts.
To read and interpret pie charts; to use percentages in pie charts.
To read and interpret pie charts; to use knowledge of angles to interpret pie charts.
To read line graphs; to interpret the information in line graphs that show distance and time.
To read and interpret line graphs; to answer questions about the information in line graphs.
To convert miles into kilometres and kilometres into miles.
To read and interpret line graphs.

Chapter 15 – Negative Numbers

To add and subtract negative numbers using a number line.
To create number stories using negative numbers.