



Maths

Skills taught in Year 6 at The Grange

Place Value

	Counting	Represent	Use PV and Compare	Problems & Rounding
Year Six		<ul style="list-style-type: none"> Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit. 	<ul style="list-style-type: none"> Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit. 	<ul style="list-style-type: none"> Round any whole number to a required degree of accuracy. Use negative numbers in context and calculate intervals across zero. Solve number and practical problems that involve all of the above.

Addition & Subtraction

	Recall, Represent, Use	Calculations	Solve Problems
Year Six		<ul style="list-style-type: none"> Perform mental calculations, including with mixed operations and large numbers. Use their knowledge of the order of operations to carry out calculations involving the four operations. 	<ul style="list-style-type: none"> Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Multiplication and Division

	Recall, Represent, Use	Calculations	Solve Problems	Combined Operations
Year Six	<ul style="list-style-type: none"> Identify common factors, common multiples and prime numbers. Use estimation to check answers to calculations. 	<ul style="list-style-type: none"> Multiply multi-digit numbers up to 4-digits by a 2-digit using a formal written method of long multiplication. Divide numbers up to 4-digits by a 2-digit whole number using long division including remainders. Divide numbers up to 4-digit by a 2-digit number using short division and interpreting remainders. 	<ul style="list-style-type: none"> Solve problems involving addition, subtraction, multiplication and division. 	<ul style="list-style-type: none"> Use their knowledge of the order of operations to carry out calculations involving the four operations.

Fractions

	Recognise and Write	Compare	Calculations	Solve Problems
Year Six		<ul style="list-style-type: none"> Use common factors to simplify fractions. Use common multiples to express fractions in the same denomination. Compare and order fractions, including >1. 	<ul style="list-style-type: none"> Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form. Divide proper fractions by whole numbers. 	

Decimals, Percentages and Algebra:

	Calculations & Problems (Decimals)	Fractions, Decimals and Percentages	Ratio and Proportion	Algebra
Year Six	<ul style="list-style-type: none"> • Multiply and divide numbers by 10, 100 and 100 giving answers up to three decimal places. • Multiply 1-digit numbers with up to two decimal places by whole numbers. • Use written division methods in cases where the answers has up to two decimal places. • Solve problems which require answers to be rounded to specific degrees of accuracy. 	<ul style="list-style-type: none"> • Associate a fraction with division and calculate decimal fraction equivalents. • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. 	<ul style="list-style-type: none"> • Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. • Solve problems involving the calculation of percentages and the use of percentages for comparison. • Solve problems involving similar shapes where the scale factor is known or can be found. • Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. 	<ul style="list-style-type: none"> • Use simple formulae. • Generate and describe linear number sequences. • Express missing number problems algebraically. • Find pairs of numbers that satisfy an equation with two unknowns. • Enumerate possibilities of combinations of two variables.

Note – algebraic thinking is seen in the ‘missing number’ objectives from Y1 upwards.

Measurement

	Using Measures	Money	Time	Perimeter, Area, Volume
Year Six	<ul style="list-style-type: none">• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.• Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit and vice versa, using decimal notation to up to three decimal places.• Convert between miles and km.		<ul style="list-style-type: none">• Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit and vice versa.	<ul style="list-style-type: none">• Recognise that shapes with the same areas can have different perimeters and vice versa.• Recognise when it is possible to use formulae for area of parallelograms and triangles.• Calculate, estimate and compare volume of cubes, cuboids, using standard units including cubic m, cubic cm and extending to other units.

Geometry

	2D shapes	3D shapes	Angles and Lines	Position and Direction
Year Six	<ul style="list-style-type: none">• Draw 2D shapes using given dimensions and angles.• Compare and classify geometric shapes based on their properties and sizes.• Illustrate and name parts of circles including radius, diameter and circumference and know that diameter is twice the radius.	<ul style="list-style-type: none">• Recognise, describe and build simple 3D shapes including making nets.	<ul style="list-style-type: none">• Find unknown angles in any triangles, quadrilaterals and regular polygons.• Recognise angles where they meet at a point, are on a straight line or are vertically opposite and find missing angles.	<ul style="list-style-type: none">• Describe positions on the full coordinate grid (all four quadrants).• Draw and translate simple shapes on the coordinate plane and reflect them in the axes.

Statistics

	Present and Interpret	Solve Problems
Year Six	<ul style="list-style-type: none">• Interpret and construct pie charts and line graphs and use these to solve problems.	<ul style="list-style-type: none">• Calculate and interpret the mean as an average.