



## Maths

### Skills taught in Year 5 at The Grange

#### Place Value

	Counting	Represent	Use PV and Compare	Problems & Rounding
<b>Year Five</b>		<ul style="list-style-type: none"> <li>Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.</li> <li>Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> </ul>	<ul style="list-style-type: none"> <li>Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.</li> </ul>	<ul style="list-style-type: none"> <li>Interpret negative numbers in context.</li> <li>Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.</li> <li>Solve number problems and practical problems that involve all of the above.</li> </ul>

#### Addition & Subtraction

	Recall, Represent, Use	Calculations	Solve Problems
<b>Year Five</b>	<ul style="list-style-type: none"> <li>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract whole numbers with more than 4 digits, including using formal written methods.</li> <li>Add and subtract numbers mentally with increasingly large numbers.</li> </ul>	<ul style="list-style-type: none"> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> <li>Solve problems involving addition and subtraction, multiplication and division and a</li> </ul>

			combination of these, including understanding the meaning of the equals sign.
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### Multiplication and Division

	Recall, Represent, Use	Calculations	Solve Problems	Combined Operations
<b>Year Five</b>	<ul style="list-style-type: none"> <li>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</li> <li>Know and use the vocabulary of prime numbers, prime numbers, composite (non-prime) numbers.</li> <li>Establish whether a number up to 100 is prime and recall prime number up to 19.</li> <li>Recognise and use square numbers and cube numbers and use the correct notation.</li> </ul>	<ul style="list-style-type: none"> <li>Multiply numbers up to 4-digits by a 1-digit number using a formal written method.</li> <li>Multiply and divide numbers mentally drawing upon known facts.</li> <li>Divide numbers up to 4-digits by a 1-digit number using a formal written method and interpret remainders.</li> <li>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving multiplication and division including using their knowledge of factors, multiples, squares and cubes and solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving addition, subtraction, multiplication and division and a combination of these.</li> </ul>

### Fractions

	Recognise and Write	Compare	Calculations	Solve Problems
<b>Year Five</b>	<ul style="list-style-type: none"> <li>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</li> <li>Recognise mixed numbers and improper fractions and</li> </ul>	<ul style="list-style-type: none"> <li>Compare and order fractions whose denominators are all multiples of the same number.</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract fractions with the same denominator and denominators that are multiples of the same number.</li> <li>Multiply proper fractions and mixed numbers by whole</li> </ul>	

	convert from one form to the other and write mathematical statements >1 as a mixed number.		numbers, supported by materials and diagrams.	
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**Decimals, Percentages and Algebra:**

	Calculations & Problems (Decimals)	Fractions, Decimals and Percentages	Ratio and Proportion	Algebra
<b>Year Five</b>	<ul style="list-style-type: none"> <li>Solve problems involving number up to three decimal places.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise the per cent symbol and understand that per cent relates to 'number of parts per whole'.</li> <li>Write percentages as a fraction with a denominator of 100 and as a decimal.</li> <li>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</li> </ul>		

**Note – algebraic thinking is seen in the 'missing number' objectives from Y1 upwards.**

## Measurement

	Using Measures	Money	Time	Perimeter, Area, Volume
<b>Year Five</b>	<ul style="list-style-type: none"><li>• Convert between different units of metric measure.</li><li>• Understand and use approximate equivalences between metric and common imperial units.</li><li>• Use all four operations to solve problems involving measure using decimal notation, including scaling.</li></ul>	<ul style="list-style-type: none"><li>• Use all four operations to solve problems involving measure.</li></ul>	<ul style="list-style-type: none"><li>• Solve problems involving calculations converting between units of time.</li></ul>	<ul style="list-style-type: none"><li>• Measure and calculate the perimeter of composite rectilinear shapes in cm and m.</li><li>• Calculate and compare the area of rectangles and including using standard units, square cm, square m, and estimate the area of irregular shapes.</li><li>• Estimate volume and capacity.</li></ul>

## Geometry

	2D shapes	3D shapes	Angles and Lines	Position and Direction
<b>Year Five</b>	<ul style="list-style-type: none"><li>• Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li><li>• Use the properties of rectangle to deduce related facts and find missing lengths and angles.</li></ul>	<ul style="list-style-type: none"><li>• Identify 3D shapes, including cubes and other cuboids from 2D representations.</li></ul>	<ul style="list-style-type: none"><li>• Know angles are measured in degrees.</li><li>• Estimate and compare acute, obtuse and reflex angles.</li><li>• Draw given angles and measure them in degrees.</li><li>• Identify angles at a point and one whole turn and other multiples of 90 degrees.</li></ul>	<ul style="list-style-type: none"><li>• Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language and know that the shape has not changed.</li></ul>

## Statistics

	Present and Interpret	Solve Problems
Year Five	<ul style="list-style-type: none"><li>• Complete, read and interpret information in tables including timetables.</li></ul>	<ul style="list-style-type: none"><li>• Solve comparison, sum and difference problems using information presented in a line graph.</li></ul>