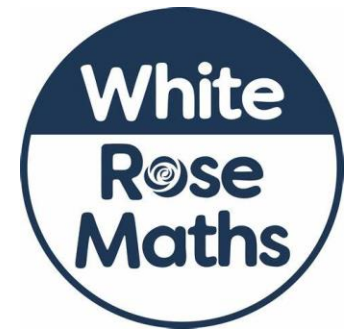


Fairlawn



Mathematician Progression of Knowledge and Skills



National Curriculum Progression in Place Value

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
Place Value: Counting	<p>ONE MORE & ONE LESS – Predict how many there will be if we add one more or take one away. Notice the link between counting forwards the one more pattern and counting back and the one less pattern.</p> <p>COUNTING PATTERNS BEYOND 10 – Count on and back beyond 10 from different starting points and say what comes before or after a given number and place sequences of numbers in order.</p>	<p>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.</p> <p>Count numbers to 100 in numerals; count in multiples of twos, fives and tens.</p>	<p>Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.</p>	<p>Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 or less than a given number.</p>	<p>Count in multiples of 6, 7, 9, 25 and 1000. Count backwards through zero to include negative numbers.</p>	<p>Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. Count forwards and backwards with positive and negative whole numbers, including through zero.</p>		
Place Value: Represent	<p>MATCH - Find and match objects which are the same.</p> <p>REPRESENTING 1, 2, 3 – Identify representations of 1, 2, 3, subitise or count to find how many make our own collections of 1, 2, 3 objects. Match number names to numerals and quantities Count to 3 objects in different arrangements and recognise that the final number we say names the quantity of the set.</p> <p>FOUR – Count on and back to 4, count or subitise set of up to 4 objects and match number names to numerals and quantities and say which sets have more or fewer items. Represent numbers to 4.</p> <p>FIVE – Subitise up to 5 items and count forwards and backwards. Represent up to 5 objects.</p> <p>6, 7 & 8 - Represent 6, 7 & 8 in different ways and count out required number of objects from a larger group. Order and compare representations of 6, 7 & 8 noticing one more/less patterns as we count on and back to 8.</p> <p>9 & 10 - Represent 9 & 10 in different ways and subitise groups of 9 & 10.</p> <p>INTRODUCING ZERO - Understand that the number zero and the number 0 can be used to represent ‘nothing there’ or ‘all gone’.</p> <p>BUILDING NUMBERS BEYOND 10 – Build and identify numbers to 20 (and beyond). Recognise that numbers 1-9 repeat after every full 10.</p>	<p>Identify and represent numbers using objects and pictorial representations.</p> <p>Read and write numbers to 100 in numerals.</p> <p>Read and write numbers from 1 to 20 in numerals and words.</p>	<p>Read and write numbers to at least 100 in numerals in words.</p> <p>Identify, represent and estimate numbers using different representations, including the number line.</p>	<p>Identify, represent, and estimate numbers using different representations.</p> <p>Read and write numbers up to 1,000 in numerals and in words.</p>	<p>Identify, represent and estimate numbers using different representations.</p> <p>Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.</p>	<p>Read, write, (order and compare) numbers to at least 1,000,000 and determine the value of each digit.</p> <p>Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.</p>	<p>Read, write, (order and compare) numbers up to 10,000,000 and determine the value of each digit.</p>	
Place Value: Using and Comparing	<p>COMPARE AMOUNTS – Compare and order sets of objects by having more, fewer or the same amount of items as another set.</p> <p>COMPARING 1, 2, 3 – Understand each number is one more than the number before counting forwards and each number is one less than the previous when counting backwards, represent one more and one less and make comparisons.</p> <p>COMPARING NUMBERS TO 5 - Understand/represent that when comparing numbers, one quantity can be more than, the same as or fewer than another quantity.</p> <p>COMPARING NUMBERS TO 10 - Making comparisons of sets of objects, lining up items with 1-1 correspondence Understand that when making comparisons, a set can have more items, fewer items or the same number of items as another set. Compare 2 quantities and then order 3 or more quantities</p>	<p>Given a number, identify one more and one less.</p>	<p>Recognise the place value of each digit in a two-digit number (tens, ones).</p> <p>Compare and order numbers from 0 up to 100; use <, > and = signs.</p>	<p>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).</p> <p>Compare and order numbers up to 1,000.</p>	<p>Find 1,000 more or less than a given number.</p> <p>Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones).</p> <p>Order and compare numbers beyond 1,000.</p>	<p>(Read, write) order and compare numbers to at least 1,000,000 and determine the value of each digit.</p>	<p>(Read, write), order and compare numbers up to 10,000,000 and determine the value of each digit.</p>	
Place Value: Problems and Rounding			<p>Use place value and number facts to solve problems.</p>	<p>Solve number problems and practical problems involving these ideas.</p>	<p>Round any number to the nearest 10, 100 or 1,000.</p> <p>Solve number and practical problems that involve all of the above and with increasingly large positive numbers.</p>	<p>Interpret negative numbers in context.</p> <p>Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000.</p> <p>Solve number problems and practical problems that involve all the above.</p>	<p>Round any whole number to a required degree of accuracy.</p> <p>Use negative numbers in context and calculate intervals across zero.</p> <p>Solve number and practical problems that involve all the above.</p>	

Place Value

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5
White Rose Small Steps	<p>Match and sort Representing 1,2 and 3 Comparing 1,2 and 3 Composition of 1,2 and 3 Representing numbers to 5 Introducing zero Comparing numbers to 5 Composition of 4 and 5 6,7 and 8 Counting 9 and 10 Comparing numbers to 10 Building numbers beyond 10 Counting patterns beyond 10</p>	<p>Sort objects Count objects Count objects from a larger group Represent objects Recognise numbers as words Count on from any number 1 more Count backwards within 10 1 less Compare groups by matching Fewer, more, same Less than, greater than, equal to Compare numbers Order objects and numbers The number line Count within 20 Understand 10 Understand 11, 12 and 13 Understand 14, 15 and 16 Understand 17, 18 and 19 Understand 20 1 more and 1 less The number line to 20 Use a number line to 20 Estimate on a number line to 20 Compare numbers to 20 Order numbers to 20 Count from 20 to 50 20, 30, 40 and 50 Count by making groups of tens Groups of tens and ones Partition into tens and ones The number line to 50 Estimate on a number line to 50 1 more, 1 less Count from 50 to 100 Tens to 100 Partition into tens and ones The number line to 100 1 more, 1 less Compare numbers with the same number of tens Compare any two numbers</p>	<p>Count forwards Count backwards Count one more Count one less One to one correspondence Compare objects Introduce <, > and = Compare numbers Activity Comparing Order objects Order numbers Ordinal numbers The number line Count forwards and backwards and write numbers to 20 in numerals and words Numbers from 11 to 20 Tens and ones Count one more and one less Compare groups of objects Compare numbers Order groups of objects Order numbers</p>	<p>Represent numbers to 100 Partition numbers to 100 Number line to 100 Hundreds Represent numbers to 1,000 Partition numbers to 1,000 Flexible partitioning of numbers to 1,000 Flexible partitioning of numbers to 1,000 Hundreds, tens and ones Find 1, 10 or 100 more or less Number line to 1,000 Estimate on a number line to 1,000 Compare numbers to 1,000 Order numbers to 1,000 Count in 50s</p>	<p>Represent numbers to 1,000 Partition numbers to 1,000 Number line to 1,000 Thousands Represent numbers to 10,000 Partition numbers to 10,000 Flexible partitioning of numbers to 10,000 Find 1, 10, 100, 1,000 more or less Number line to 10,000 Estimate on a number line to 10,000 Compare numbers to 10,000 Order numbers to 10,000 Roman numerals Round to the nearest 10 Round to the nearest 100 Round to the nearest 1,000 Round to the nearest 10, 100 or 1,000</p>	<p>Roman numerals to 1,000 Numbers to 10,000 Numbers to 100,000 Numbers to 1,000,000 Read and write numbers to 1,000,000 Powers of 10 10/100/1,000/10,000/100,000 more or less Partition numbers to 1,000,000 Number line to 1,000,000 Compare and order numbers to 100,000 Compare and order numbers to 1,000,000 Round to the nearest 10, 100 or 1,000 Round within 100,000 Round within 1,000,000 Understand negative numbers Count through zero in 1s Count through zero in multiples Compare and order negative numbers Find the difference</p>

Progression in Addition & Subtraction

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition & Subtraction: Recall, Represent and Use	<p>COMPOSITION OF 1, 2, 3 – Understand that all numbers are made up of smaller numbers. Notice different compositions of 2 & 3.</p> <p>COMPOSITION OF 4 & 5 - Understand that all numbers are made up of smaller numbers – compositions of 4&5 Subitise (instantly recognise small quantities without counting) and notice that numbers can be made up of 2 parts or more than 2 parts.</p> <p>BONDS TO 10 - Use real objects in different contexts to explore number bonds to 10.</p>	<p>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.</p> <p>Represent and use number bonds and related subtraction facts within 20.</p>	<p>Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.</p> <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p>Estimate the answer to a calculation and use inverse operations to check answers.</p>	<p>Estimate and use inverse operations to check answers to a calculation.</p>	<p>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.</p>	
Addition & Subtraction: Calculations	<p>ONE MORE & ONE LESS – Predict how many there will be if we add one more or take one away Notice the link between counting forwards the one more pattern and counting back and the one less pattern.</p> <p>COMBINING 2 GROUPS - Combine 2 groups to find out how many altogether.</p> <p>ADDING MORE – Use real objects to see that the quantity of a group can be changed by adding more and represent these numbers.</p> <p>TAKING AWAY – Use real objects to see that the quantity of a group can be changed by taking items away.</p>	<p>Add and subtract one-digit and two-digit numbers to 20, including zero.</p>	<p>Add and subtract numbers using concrete objects, pictorial representations, and mentally including:</p> <ul style="list-style-type: none"> - a two-digit number and ones. - a two-digit number and tens. - two two-digit numbers. - adding three one-digit numbers. 	<p>Add and subtract numbers mentally including:</p> <ul style="list-style-type: none"> - a three-digit number and ones. - a three-digit number and tens. - a three digit numbers and hundreds. <p>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.</p>	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</p>	<p>Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).</p> <p>Add and subtract numbers mentally with increasingly large numbers.</p>	<p>Perform mental calculations, including with mixed operations and large numbers.</p> <p>Use their knowledge of the order of the operations to carry out calculations involving the four operations.</p>
Addition & Subtraction: Solve Problems	<p>MAKING PAIRS - Find and make pairs and understand that a pair is two. Understand that some quantities can have an odd one left over with no partner.</p>	<p>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.</p>	<p>Solve one-step problems that addition and subtraction:</p> <ul style="list-style-type: none"> - using concrete objects and pictorial representations, including those involving numbers, quantities and measures. 	<p>Solve problems including missing number problems, using number facts, place value, and more complex addition and subtraction.</p>	<p>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p> <p>Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.</p>	<p>Solve addition and subtraction multi-step problems in contexts, deciding which operation and methods to use and why.</p>

Addition and Subtraction

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
White Rose Small Steps	<p>One more and less</p> <p>Bonds to 10</p> <p>Combining 2 amounts</p> <p>Making pairs</p> <p>Adding more</p> <p>Taking away</p>	<p>Introduce parts and wholes</p> <p>Part-whole model</p> <p>Write number sentences</p> <p>Fact families - addition facts</p> <p>Number bonds within 10</p> <p>Systematic number bonds within 10</p> <p>Number bonds to 10</p> <p>Addition - add together</p> <p>Addition - add more</p> <p>Addition problems</p> <p>Find a part</p> <p>Subtraction - find a part</p> <p>Fact families - the eight facts</p> <p>Subtraction - take away/cross out (How many left?)</p> <p>Subtraction - take away (How many left?)</p> <p>Subtraction on a number line</p> <p>Add or subtract 1 or 2</p> <p>Add by counting on within 20</p> <p>Add ones using number bonds to 20</p> <p>Find and make number bonds to 20</p> <p>Doubles</p> <p>Near doubles</p> <p>Subtract ones using number bonds</p> <p>Subtraction - counting back</p> <p>Subtraction - finding the difference</p> <p>Related facts</p> <p>Missing number problems</p>	<p>Bonds to 10</p> <p>Fact families - addition and subtraction bonds within 20</p> <p>Related facts</p> <p>Bonds to 100 (tens)</p> <p>Add and subtract 1s</p> <p>Add by making 10</p> <p>Add three 1-digit numbers</p> <p>Add to the next 10</p> <p>Add across a 10</p> <p>Subtract across 10</p> <p>Subtract from a 10</p> <p>Subtract a 1-digit number from a 2-digit number (across a 10)</p> <p>10 more, 10 less</p> <p>Add and subtract 10s</p> <p>Add two 2-digit numbers (not across a 10)</p> <p>Add two 2-digit numbers (across a 10)</p> <p>Subtract two 2-digit numbers (not across a 10)</p> <p>Subtract two 2-digit numbers (across a 10)</p> <p>Mixed addition and subtraction</p> <p>Compare number sentences</p> <p>Missing number problems</p>	<p>Apply number bonds within 10</p> <p>Add and subtract 1s</p> <p>Add and subtract 10s</p> <p>Add and subtract 100s</p> <p>Spot the pattern</p> <p>Add 1s across a 10</p> <p>Add 10s across a 100</p> <p>Subtract 1s across a 10</p> <p>Subtract 10s across a 100</p> <p>Make connections</p> <p>Add two numbers (no exchange)</p> <p>Subtract two numbers (no exchange)</p> <p>Add two numbers (across a 10)</p> <p>Add two numbers (across a 100)</p> <p>Subtract two numbers (across a 10)</p> <p>Subtract two numbers (across a 100)</p> <p>Add 2-digit and 3-digit numbers</p> <p>Subtract a 2-digit number from a 3-digit number</p> <p>Complements to 100</p> <p>Estimate answers</p> <p>Inverse operations</p> <p>Make decisions</p>	<p>Add and subtract 1s, 10s, 100s and 1,000s</p> <p>Add up to two 4-digit numbers - no exchange</p> <p>Add two 4-digit numbers - one exchange</p> <p>Add two 4-digit numbers - more than one exchange</p> <p>Subtract two 4-digit numbers - no exchange</p> <p>Subtract two 4-digit numbers - one exchange</p> <p>Subtract two 4-digit numbers - more than one exchange</p> <p>Efficient subtraction</p> <p>Estimate answers</p> <p>Checking strategies</p>	<p>Mental strategies</p> <p>Add whole numbers with more than four digits</p> <p>Subtract whole numbers with more than four digits</p> <p>Round to check answers</p> <p>Inverse operations (addition and subtraction)</p> <p>Multi-step addition and subtraction problems</p> <p>Compare calculations</p> <p>Find missing numbers</p>	<p>Add and subtract integers</p>

Progression in Multiplication & Division

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication & Division: Recall, Represent and Use	<p>DOUBLING – Know that double means ‘twice as many’.</p> <p>Build doubles using real objects and mathematical equipment.</p> <p>Sort examples of doubles and non-doubles and explain why.</p> <p>EVEN & ODD – Understand that some quantities will share equally into 2 groups, and some won’t.</p> <p>Notice that some items can be grouped into pairs, and some will have one left over.</p> <p>Notice odd and even structures.</p>		<p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.</p>	<p>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.</p>	<p>Recall multiplication and division facts for multiplication tables up to 12 x 12.</p> <p>Use place value, known and derived facts to multiply and divide mentally, including multiplying by 0 and 1; dividing by 1; multiplying together three numbers.</p> <p>Recognise and use factor pairs and commutativity in mental calculations.</p>	<p>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</p> <p>Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.</p> <p>Establish whether a number up to 100 is prime and recall prime numbers up to 19.</p> <p>Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³).</p>	
Multiplication & Division: Calculations	<p>SHARING & GROUPING – Share items equally and notice when items are not shared fairly</p> <p>Recognise and make equal groups.</p> <p>Notice that sometimes there may be items left over when we share or group and find ways to resolve this.</p>		<p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.</p>	<p>Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.</p>	<p>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.</p>	<p>Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for two-digit numbers.</p> <p>Multiply and divide numbers mentally drawing upon known facts.</p> <p>Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.</p> <p>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000.</p>	<p>Multiply multi-digit numbers up to 4 digit s by a two-digit whole number using the formal written method of long multiplication.</p> <p>Divide numbers up to 4 digit by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.</p> <p>Divide numbers up to 4 digit by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.</p> <p>Perform mental calculations, including with mixed operations and large numbers.</p>
Multiplication & Division: Solve Problems		<p>Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.</p>	<p>Solve problems involving multiplication and division, sing materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context.</p>	<p>Solve problems including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.</p>	<p>Solve problems involving multiplication and adding, including using the distributive law to multiply two-digit numbers by one-digit, integer scaling problems and harder correspondence problem such as n objects are connected to m objects.</p>	<p>Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.</p> <p>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</p>	<p>Solve problems involving addition, subtraction, multiplication and division.</p>
Multiplication & Division: Combined						<p>Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.</p>	<p>Use their knowledge of the order of operations to carry out calculations involving the four operations.</p>

Multiplication and Division

Multiplication and Division							
	E Y F S	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
White Rose Small Steps		Count in 2s Count in 10s Count in 5s Recognise equal groups Add equal groups Make arrays Make doubles Make equal groups - grouping 9 Make equal groups - sharing	Recognise equal groups Make equal groups Add equal groups Introduce the multiplication symbol 5 Multiplication sentences Use arrays Make equal groups – grouping Make equal groups – sharing The 2 times-table Divide by 2 Doubling and halving Odd and even numbers The 10 times-table Divide by 10 The 5 times-table Divide by 5 The 5 and 10 times-tables	Multiplication - equal groups Use arrays Multiples of 2 Multiples of 5 and 10 Sharing and grouping Multiply by 3 Divide by 3 The 3 times-table Multiply by 4 Divide by 4 The 4 times-table Multiply by 8 Divide by 8 The 8 times-table The 2, 4 and 8 times-tables Multiples of 10 Related calculations Reasoning about multiplication Multiply a 2-digit number by a 1-digit number - no exchange Multiply a 2-digit number by a 1-digit number - with exchange Link multiplication and division Divide a 2-digit number by a 1-digit number - no exchange Divide a 2-digit number by a 1-digit number - flexible partitioning Divide a 2-digit number by a 1-digit number - with remainders Scaling How many ways?	Multiples of 3 Multiply and divide by 6 6 times-table and division facts Multiply and divide by 9 9 times-table and division facts The 3, 6 and 9 times-tables Multiply and divide by 7 7 times-table and division facts 11 times-table and division facts 12 times-table and division facts Multiply by 1 and 0 Divide a number by 1 and itself Multiply three numbers Factor pairs Use factor pairs Multiply by 10 Multiply by 100 Divide by 10 Divide by 100 Related facts – multiplication and division Informal written methods for multiplication Multiply a 2-digit number by a 1-digit number Multiply a 3-digit number by a 1-digit number Divide a 2-digit number by a 1-digit number (1) Divide a 2-digit number by a 1-digit number (2) Divide a 3-digit number by a 1-digit number Correspondence problems Efficient multiplication	Multiples Common multiples Factors Common factors Prime numbers Square numbers Cube numbers Multiply by 10, 100 and 1,000 Divide by 10, 100 and 1,000 Multiples of 10, 100 and 1,000 Multiply up to a 4-digit number by a 1-digit number Multiply a 2-digit number by a 2-digit number (area model) Multiply a 2-digit number by a 2-digit number Multiply a 3-digit number by a 2-digit number Multiply a 4-digit number by a 2-digit number Solve problems with multiplication Short division Divide a 4-digit number by a 1-digit number Divide with remainders Efficient division Solve problems with multiplication and division	Common factors Common multiples Rules of divisibility Primes to 100 Square and cube numbers Multiply up to a 4-digit number by a 2-digit number Solve problems with multiplication Short division Division using factors Introduction to long division Long division with remainders Solve problems with division Solve multi-step problems Order of operations Mental calculations and estimation Reason from known facts

Progression in Fraction, Decimals & Percentages

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fraction s: Recogni se and Write		Recognise, find and name a half as one of two equal parts of an object, shape of quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape of quantity.	Recognise, name and write fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects of quantity.	Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers of quantities by 10. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.	Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 (for example $2\frac{5}{5}$ $+ 4\frac{5}{5}$ $= 6\frac{5}{5}$ $= 1\frac{15}{5}$).	
Fraction s: Compar e			Recognise the equivalences of $\frac{2}{4}$ and $\frac{1}{2}$.	Recognise and show, using diagrams, equivalent fractions with small denominators. Compare and order unit fractions, and fractions with the same denominators.	Recognise and show, using diagrams, families of common equivalent fractions.	Compare and order fractions whose denominators are all multiples of the same number.	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions > 1 .
Fraction s: Calculati ons			Write simple fractions for example $\frac{1}{2}$ of 6 = 3.	Add and subtract fractions with the same denominator within one whole for example $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ and $\frac{7}{7} - \frac{1}{7} = \frac{6}{7}$.	Add and subtract fractions with the same denominator.	Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Multiply proper fractions and mixed numbers, supported by materials and diagrams.	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 (for example $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ and $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$). Divide proper fractions by whole numbers (for example $\frac{1}{3} \div 2 = \frac{1}{6}$ and $\frac{1}{3} \div 2 = \frac{1}{6}$).
Fraction s: Solve Problem s				Solve problems that involve all the above.	Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.		

Fractions, Decimals and Percentages

	E Y F S	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
White Rose Small Steps		Recognise a half of an object or a shape Find a half of an object or a shape Recognise a half of a quantity Find a half of a quantity Recognise a quarter of an object or a shape Find a quarter of an object or a shape Recognise a quarter of a quantity Find a quarter of a quantity Recognise the equivalence of a half and two quarters Find a quarter of a quantity	Introduction to parts and whole Equal and unequal parts Recognise a half Find a half Recognise a quarter Find a quarter Recognise a third Find a third Find the whole Unit fractions Non-unit fractions Recognise the equivalence of a half and two quarters Recognise three-quarters Find three-quarters Count in fractions up to a whole	Understand the denominators of unit fractions Compare and order unit fractions Understand the numerators of non-unit fractions Understand the whole Compare and order non-unit fractions Fractions and scales Fractions on a number line Count in fractions on a number line Equivalent fractions on a number line Equivalent fractions as bar models Add fractions Subtract fractions Partition the whole Unit fractions of a set of objects Non-unit fractions of a set of objects Reasoning with fractions of an amount	Understand the whole Count beyond 1 Partition a mixed number Number lines with mixed numbers Compare and order mixed numbers Understand improper fractions Convert mixed numbers to improper fractions Convert improper fractions to mixed numbers Equivalent fractions on a number line Equivalent fraction families Add two or more fractions Add fractions and mixed numbers Subtract two fractions Subtract from whole amounts Subtract from mixed numbers Tenths as fractions Tenths as decimals Tenths on a place value chart Tenths on a number line Divide a 1-digit number by 10 Divide a 2-digit number by 10 Hundredths as fractions Hundredths as decimals Hundredths on a place value chart Divide a 1- or 2-digit number by 100 Make a whole with tenths Make a whole with hundredths Partition decimals Flexibly partition decimals Compare decimals Order decimals Round to the nearest whole number	Find fractions equivalent to a unit fraction Find fractions equivalent to a non-unit fraction Recognise equivalent fractions Convert improper fractions to mixed numbers Convert mixed numbers to improper fractions Compare fractions less than 1 Order fractions less than 1 Compare and order fractions greater than 1 Add and subtract fractions with the same denominator Add fractions within 1 Add fractions with total greater than 1 Add to a mixed number Add two mixed numbers Subtract fractions Subtract from a mixed number Subtract from a mixed number - breaking the whole Subtract two mixed numbers Multiply a unit fraction by an integer Multiply a non-unit fraction by an integer 3 Multiply a mixed number by an integer Calculate a fraction of a quantity Fraction of an amount Find the whole Use fractions as operators Decimals up to 2 decimal places Equivalent fractions and decimals (tenths) Equivalent fractions and decimals (hundredths) Equivalent fractions and decimals Thousandths as fractions Thousandths as decimals Thousandths on a place value chart Order and compare decimals (same number of decimal places) Order and compare any decimals with up to 3 decimal places Round to the nearest whole number Round to 1 decimal place Understand percentages	Equivalent fractions and simplifying Equivalent fractions on a number line Compare and order (denominator) Compare and order (numerator) Add and subtract simple fractions Add and subtract any two fractions Add mixed numbers Subtract mixed numbers Multiply fractions by integers Multiply fractions by fractions Divide a fraction by an integer Divide any fraction by an integer Mixed questions with fractions Fraction of an amount Fraction of an amount - find the whole Place value within 1 Place value – integers and decimals Round decimals Add and subtract decimals Multiply by 10, 100 and 1,000 Divide by 10, 100 and 1,000 Multiply decimals by integers Divide decimals by integers Multiply and divide decimals in context Decimal and fraction equivalents Fractions as division Understand percentages Fractions to percentages Equivalent fractions, decimals and percentages Order fractions, decimals and percentages Percentage of an amount – one step Percentage of an amount – multi-step Percentages – missing values

Measurement

	E YF S	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">White Rose Small Steps</p>		<p>Compare lengths and heights Measure length using objects Measure length in centimetres Heavier and lighter Measure mass Compare mass Full and empty Compare volume Measure capacity Compare capacity Unitising Recognise coins Recognise notes Count in coins Before and after Days of the week Months of the year Hours, minutes and seconds Tell the time to the hour Tell the time to the half hour Before and after Days of the week Months of the year Hours, minutes and seconds Tell the time to the hour Tell the time to the half hour</p>	<p>Count money - pence Count money - pounds (notes and coins) Count money - pounds and pence Choose notes and coins Make the same amount Compare amounts of money Calculate with money Make a pound Find change Two-step problems Measure in centimetres Measure in metres Compare lengths and heights Order lengths and heights Four operations with lengths and heights Compare mass Measure in grams Measure in kilograms Four operations with mass Compare volume and capacity Measure in millilitres Measure in litres Four operations with volume and capacity Temperature O'clock and half past Quarter past and quarter to Tell time past the hour Tell time to the hour Tell the time to 5 minutes Minutes in an hour Hours in a day</p>	<p>Measure in metres and centimetres Measure in millimetres Measure in centimetres and millimetres Metres, centimetres and millimetres Equivalent lengths (metres and centimetres) Equivalent lengths (centimetres and millimetres) Compare lengths Add lengths Subtract lengths What is perimeter? Measure perimeter Calculate perimeter Use scales Measure mass in grams Measure mass in kilograms and grams Equivalent masses (kilograms and grams) Compare mass Add and subtract mass Measure capacity and volume in millilitres Measure capacity and volume in litres and millilitres Equivalent capacities and volumes (litres and millilitres) Compare capacity and volume Add and subtract capacity and volume Pounds and pence Convert pounds and pence Add money Subtract money Find change Roman numerals to 12 Tell the time to 5 minutes Tell the time to the minute Read time on a digital clock Use a.m. and p.m. Years, months and days Days and hours Hours and minutes - use start and end times Hours and minutes - use durations Minutes and seconds Units of time</p>	<p>What is area? Count squares Make shapes Compare areas Measure in kilometres and metres Equivalent lengths (kilometres and metres) Perimeter on a grid Perimeter of a rectangle Perimeter of rectilinear shapes Find missing lengths in rectilinear shapes Calculate the perimeter of rectilinear shapes Perimeter of regular polygons Perimeter of polygons Write money using decimals Convert between pounds and pence Compare amounts of money Estimate with money Calculate with money Solve problems with money Years, months, weeks and days Hours, minutes and seconds Convert between analogue and digital times Convert to the 24 hour clock Convert from the 24 hour clock</p>	<p>Perimeter of rectangles Perimeter of rectilinear shapes Perimeter of polygons Area of rectangles Area of compound shapes Estimate area Kilograms and kilometres Millimetres and millilitres Convert units of length Convert between metric and imperial units Convert units of time Calculate with timetables Cubic centimetres Compare volume Estimate volume Estimate capacity</p>	<p>Metric measures Convert metric measures Calculate with metric measures Miles and kilometres Imperial measures</p>

Geometry

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
White Rose Small Steps		<p>Recognise and name 3-D shapes</p> <p>Sort 3-D shapes</p> <p>Recognise and name 2-D shapes</p> <p>Sort 2-D shapes</p> <p>Patterns with 2-D and 3-D shapes</p> <p>Describe turns</p> <p>Describe position - left and right</p> <p>Describe position - forwards and backwards</p> <p>Describe position - above and below</p> <p>Ordinal numbers</p>	<p>Recognise 2-D and 3-D shapes</p> <p>Count sides on 2-D shapes</p> <p>Count vertices on 2-D shapes</p> <p>Draw 2-D shapes</p> <p>Lines of symmetry on shapes</p> <p>Use lines of symmetry to complete shapes</p> <p>Sort 2-D shapes</p> <p>Count faces on 3-D shapes</p> <p>Count edges on 3-D shapes</p> <p>Count vertices on 3-D shapes</p> <p>Sort 3-D shapes</p> <p>Make patterns with 2-D and 3-D shapes</p> <p>Language of position</p> <p>Describe movement</p> <p>Describe turns</p> <p>Describe movement and turns</p> <p>Shape patterns with turns</p>	<p>Turns and angles</p> <p>Right angles</p> <p>Compare angles</p> <p>Measure and draw accurately</p> <p>Horizontal and vertical</p> <p>Parallel and perpendicular</p> <p>Recognise and describe 2-D shapes</p> <p>Draw polygons</p> <p>Recognise and describe 3-D shapes</p> <p>Make 3-D shapes</p>	<p>Understand angles as turns</p> <p>Identify angles</p> <p>Compare and order angles</p> <p>Triangles</p> <p>Quadrilaterals</p> <p>Polygons</p> <p>Lines of symmetry</p> <p>Complete a symmetric figure</p> <p>Describe position using coordinates</p> <p>Plot coordinates</p> <p>Draw 2-D shapes on a grid</p> <p>Translate on a grid</p> <p>Describe translation on a grid</p>	<p>Understand and use degrees</p> <p>Classify angles</p> <p>Estimate angles</p> <p>Measure angles up to 180</p> <p>Draw lines and angles accurately</p> <p>Calculate angles around a point</p> <p>Calculate angles on a straight line</p> <p>Lengths and angles in shapes</p> <p>Regular and irregular polygons</p> <p>3-D shapes</p> <p>Read and plot coordinates</p> <p>Problem solving with coordinates</p> <p>Translation</p> <p>Translation with coordinates</p> <p>Lines of symmetry</p> <p>Reflection in horizontal and vertical lines</p>	<p>Shapes - same area</p> <p>Area and perimeter</p> <p>Area of a triangle – counting squares</p> <p>Area of a right-angled triangle</p> <p>Area of any triangle</p> <p>Area of a parallelogram</p> <p>Volume - counting cubes</p> <p>Volume of a cuboid</p> <p>Measure and classify angles</p> <p>Calculate angles</p> <p>Vertically opposite angles</p> <p>Angles in a triangle</p> <p>Angles in a triangle – special cases</p> <p>Angles in a triangle – missing angles</p> <p>Angles in quadrilaterals</p> <p>Angles in polygons</p> <p>Circles</p> <p>Draw shapes accurately</p> <p>Nets of 3-D shapes</p> <p>The first quadrant</p> <p>Read and plot points in four quadrants</p> <p>Solve problems with coordinates</p> <p>Translations</p> <p>Reflections</p>

Algebra

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
White Rose Small Steps							1-step function machines 2-step function machines Form expressions Substitution Form equations Solve 1-step equations Solve 2-step equations Find pairs of values Solve problems with two unknowns

Statistics

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
White Rose Small Steps			Make tally charts Tables Block diagrams Draw pictograms (1-1) Interpret pictograms (1-1) Draw pictograms (2, 5 and 10) Interpret pictograms (2, 5 and 10)	Interpret pictograms Draw pictograms Interpret bar charts Draw bar charts Collect and represent data Two-way tables	Interpret charts Comparison, sum and difference Interpret line graphs Draw line graphs	Draw line graphs Read and interpret line graphs Read and interpret tables Two-way tables Read and interpret timetables	Line graphs Dual bar charts Read and interpret pie charts Pie charts with percentages Draw pie charts The mean

Ratio and Proportion

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
White Rose Small Steps							Add or multiply? Use ratio language Introduction to the ratio symbol Ratio and fractions Scale drawing Use scale factors Similar shapes Ratio problems Proportion problems Recipes