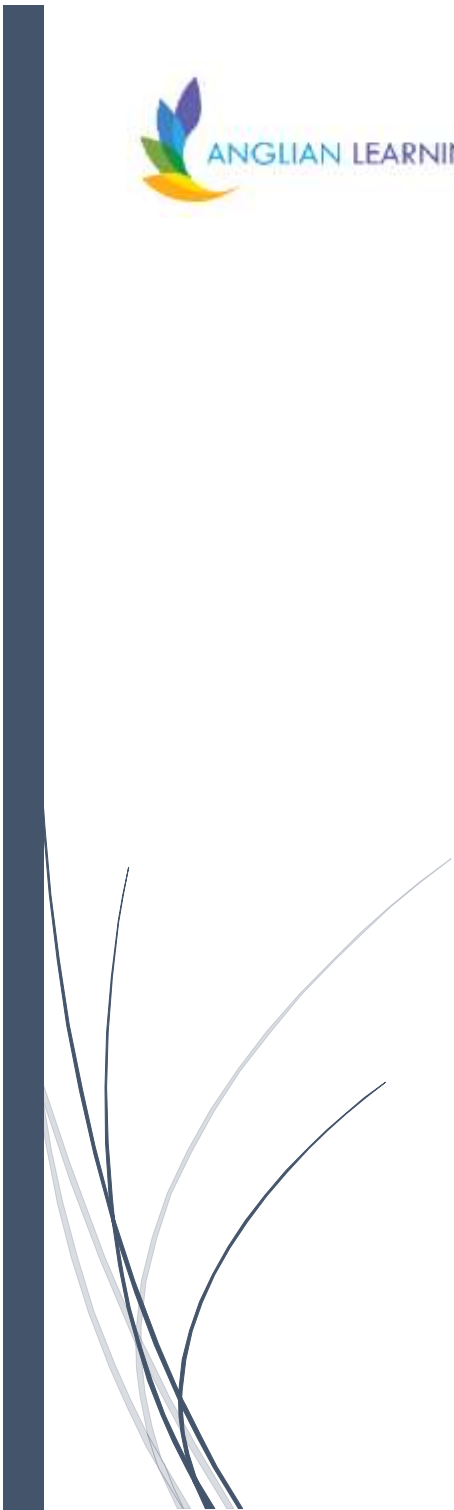




Marleigh Primary Academy

Maths Skills Progression



Development Matters – Non-statutory Curriculum Guidance for EYFS Marleigh Primary Academy Maths

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding – such as using manipulatives, including small pebbles and tens frames for organising counting – children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, ‘have a go’, talk to adults and peers about what they notice and not be afraid to make mistakes.

Birth to Three Years Old	Three and Four Years Old	Children in Reception
<ul style="list-style-type: none"> Combine objects like stacking blocks and cups. Put objects inside others and take them out again. Take part in finger rhymes with numbers. React to changes of amount in a group of up to three items. Compare amounts, saying ‘lots’, ‘more’ or ‘same’. Develop counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence. Count in everyday contexts, sometimes skipping numbers – ‘1-2-3-5’. Climb and squeeze themselves into different types of spaces. Build with a range of resources. Complete inset puzzles. Compare sizes, weights etc. using gesture and language - ‘bigger/little/smaller’, ‘high/low’, ‘tall’, ‘heavy’. 	<ul style="list-style-type: none"> Develop fast recognition of up to 3 objects, without having to count them individually (‘subitising’). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total (‘cardinal principle’). Show ‘finger numbers’ up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: ‘more than’, ‘fewer than’. Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: ‘sides’, ‘corners’, ‘straight’, ‘flat’, ‘round’. Understand position through words alone – for example, “The bag is under the table,” – with no pointing. Describe a familiar route. Discuss routes and locations, using words like ‘in front of’ and ‘behind’ Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. Combine shapes to make new ones – an arch, a bigger triangle, etc. Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like ‘pointy’, ‘spotty’, ‘blobs’, etc. Extend and create ABAB patterns – stick, leaf, stick, leaf. 	<ul style="list-style-type: none"> Count objects, actions and sounds. Subitise. Link the number symbol (numeral) with its cardinal number value. Count beyond ten. Compare numbers. Understand the ‘one more than/one less than’ relationship between consecutive numbers. Explore the composition of numbers to 10. Automatically recall number bonds for numbers 0–5 and some to 10. Select, rotate and manipulate shapes to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. Continue, copy and create repeating patterns. Compare length, weight and capacity.

<ul style="list-style-type: none"> • Notice patterns and arrange things in patterns. 	<ul style="list-style-type: none"> • Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...' 	
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EYFS Statutory Framework
Early Learning Goal: Mathematics



Children at the expected level of development will:

Number Children at the expected level of development will:

- Have a deep understanding of numbers to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system.
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

	<p><u>Mastery Maths Curriculum</u> Marleigh Primary Academy – Maths Progression</p>						
Key area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	

Place Value: Counting	<ul style="list-style-type: none"> count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens 	<ul style="list-style-type: none"> count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward 	<ul style="list-style-type: none"> count from 0 in multiples of 4, 8, 50 and 100; 	<ul style="list-style-type: none"> count backwards through zero to include negative numbers count in multiples of 6, 7, 9, 25 and 1 000 	<ul style="list-style-type: none"> count forwards and backwards with positive and negative whole numbers, including through zero count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 	
	<i>Year 1/2: Aut1, Aut3, Spr2, Sum3</i>	<i>Year 1/2: Aut3 Year 2/3: Aut3</i>	<i>Year 2/3: Aut1, Aut3, Sum2 Year 3/4: Aut1, Aut3</i>	<i>Year 3/4: Aut1, Aut3 Year 4/5: Aut1, Aut3</i>	<i>Year 4/5: Aut1 Year 5/6 Aut1</i>	
Place Value: Represent Numbers	<ul style="list-style-type: none"> identify and represent numbers using objects and pictorial representations including the number line read and write numbers to 100 in numerals read and write numbers to 20 in numerals and words 	<ul style="list-style-type: none"> read and write numbers to at least 100 in numerals and words identify, represent and estimate numbers using different representations, including the number line 	<ul style="list-style-type: none"> identify, represent and estimate numbers using different representations read and write numbers up to 1000 in numerals and words 	<ul style="list-style-type: none"> identify, represent and estimate numbers using different representations 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 	<ul style="list-style-type: none"> read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit read Roman numerals to 1000 (M) and recognize years written in Roman numerals 	<ul style="list-style-type: none"> read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
	<i>Year 1/2: Aut1, Aut3, Spr2, Sum3</i>	<i>Year 1/2: Aut3 Year 2/3: Aut1</i>	<i>Year 2/3: Aut1 Year 3/4: Aut1</i>	<i>Year 3/4: Aut1 Year 4/5: Aut1</i>	<i>Year 4/5: Aut1 Year 5/6 Aut1</i>	<i>Year 5/6: Aut1</i>

Place Value: Comparing Numbers	<ul style="list-style-type: none"> given a value, identify one more or one less use the language of: equal to, more than, less than (fewer), most, least 	<ul style="list-style-type: none"> recognize the value of each digit in a 2 digit number (tens and ones) compare and order numbers from 0 up to 100; use <, > and = signs 	<ul style="list-style-type: none"> recognize the value of each digit in a 3 digit number (hundreds, tens, ones) compare and order numbers up to 1000 	<ul style="list-style-type: none"> find 1000 more or less than a given number recognize the place value of each digit in a 4 digit number (thousands, hundreds, tens, ones) order and compare numbers beyond 1000 	<ul style="list-style-type: none"> read, write, order and compare numbers to at least 1 000 000 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
	<i>Year 1/2: Aut1, Aut3, Spr2, Sum3</i>	<i>Year 1/2: Aut3 Year 2/3: Aut1</i>	<i>Year 2/3: Aut1 Year 3/4: Aut1</i>	<i>Year 3/4: Aut1 Year 4/5: Aut1</i>	<i>Year 4/5: Aut1 Year 5/6 Aut1</i>	<i>Year 5/6: Aut1</i>
Place Value: Problems and Rounding		<ul style="list-style-type: none"> use place value and number facts to solve problems 	<ul style="list-style-type: none"> solve number problems and practical problems involving these ideas 	<ul style="list-style-type: none"> round any number to the nearest 10, 100 or 1000 solve number and practical problems involving all of the above with increasingly large positive numbers 	<ul style="list-style-type: none"> interpret negative numbers in context round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 or 100,000 solve number and practical problems that involves all of the above 	<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
		<i>Year 1/2: Aut3 Year 2/3: Aut1</i>	<i>Year 2/3: Aut1 Year 3/4: Aut1</i>	<i>Year 3/4: Aut1 Year 4/5: Aut1</i>	<i>Year 4/5: Aut1 Year 5/6 Aut1</i>	<i>Year 5/6: Aut1</i>
Addition and Subtraction: Number bonds	<ul style="list-style-type: none"> represent and use number bonds and related subtraction facts within 20 	<ul style="list-style-type: none"> recall and use addition and subtraction facts to 20 fluently, and derive and use 				

		related facts up to 100				
	<i>Year 1/2: Aut2, Sum 5</i>	<i>Year 1/2: Aut2</i> <i>Year 2/3: Aut2</i>				
Addition and Subtraction: Mental Calculation	<ul style="list-style-type: none"> add and subtract one-digit and two-digit numbers to 20, including zero read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs 	<ul style="list-style-type: none"> add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <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 show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot 	<ul style="list-style-type: none"> add and subtract numbers mentally, including: <ul style="list-style-type: none"> * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds 		<ul style="list-style-type: none"> add and subtract numbers mentally with increasingly large numbers 	<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
	<i>Year 1/2: Aut2, Sum 5</i>	<i>Year 1/2: Aut2</i> <i>Year 2/3: Aut2</i>	<i>Year 2/3: Aut2, Sum2</i> <i>Year 3/4: Aut2</i>		<i>Year 4/5: Aut2</i> <i>Year 5/6: Aut2</i>	<i>Year 5/6: Aut2</i>
Addition and Subtraction: Written Methods	<ul style="list-style-type: none"> read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs 		<ul style="list-style-type: none"> add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction 	<ul style="list-style-type: none"> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate 	<ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) 	

	<i>Year 1/2: Aut2, Sum 5</i>		<i>Year 2/3: Aut2, Sum2 Year 3/4: Aut2</i>	<i>Year 3/4: Aut2 Year 4/5: Aut2</i>	<i>Year 4/5: Aut2 Year 5/6: Aut2</i>	
Addition and Subtraction: Inverse operations, estimating and checking calculations		<ul style="list-style-type: none"> recognize and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. 	<ul style="list-style-type: none"> estimate the answer to a calculation and use inverse operations to check answers 	<ul style="list-style-type: none"> estimate and use inverse operations to check answers to a calculation 	<ul style="list-style-type: none"> use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy 	<ul style="list-style-type: none"> use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.
		<i>Year 1/2: Aut2 Year 2/3: Aut2</i>	<i>Year 2/3: Aut2, Sum 2 Year 3/4: Aut2</i>	<i>Year 3/4: Aut2 Year 4/5: Aut2</i>	<i>Year 4/5: Aut2 Year 5/6: Aut2</i>	<i>Year 5/6: Aut2</i>
Addition and Subtraction: Problem Solving	<ul style="list-style-type: none"> solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ 	<ul style="list-style-type: none"> solve problems with addition and subtraction: <ul style="list-style-type: none"> * using concrete objects and pictorial representations, including those involving numbers, quantities and measures * applying their increasing knowledge of mental and written methods 	<ul style="list-style-type: none"> solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction 	<ul style="list-style-type: none"> solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why 	<ul style="list-style-type: none"> solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 	<ul style="list-style-type: none"> solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
		<i>Year 1/2: Aut2, Sum5</i>	<i>Year 1/2: Aut2 Year 2/3: Aut2</i>	<i>Year 2/3: Aut2, Sum 2 Year 3/4: Aut2</i>	<i>Year 3/4: Aut2 Year 4/5: Aut2</i>	<i>Year 4/5: Aut2 Year 5/6: Aut2</i>
Multiplication and Division: Facts	<ul style="list-style-type: none"> count in multiples of twos, fives and tens 	<ul style="list-style-type: none"> count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward 	<ul style="list-style-type: none"> count from 0 in multiples of 4, 8, 50 and 100 recall and use multiplication and division facts for the 3, 4 and 8 	<ul style="list-style-type: none"> count in multiples of 6, 7, 9, 25 and 1 000 recall multiplication and division facts for multiplication 	<ul style="list-style-type: none"> count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 	

		<ul style="list-style-type: none"> recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognizing odd and even numbers 	multiplication tables	tables up to 12×12		
	<i>Year 1/2: Aut3</i>	<i>Year 1/2: Aut3</i> <i>Year 2/3: Aut3, Spr1</i>	<i>Year 2/3: Aut3, Spr1</i> <i>Year 3/4: Aut3</i>	<i>Year 3/4: Aut3</i> <i>Year 4/5: Aut3</i>	<i>Year 4/5: Aut3</i> <i>Year 5/6: Aut2</i>	
Multiplication and Division: Mental Calculations		<ul style="list-style-type: none"> show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 recognize and use factor pairs and commutativity in mental calculations 	<ul style="list-style-type: none"> multiply and divide numbers mentally drawing upon known facts multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 	<ul style="list-style-type: none"> perform mental calculations, including with mixed operations and large numbers
		<i>Year 1/2: Aut3, Spr1</i> <i>Year 2/3: Aut3, Spr1</i>	<i>Year 2/3: Aut3, Spr1</i> <i>Year 3/4: Aut3, Spr1</i>	<i>Year 3/4: Aut3, Spr1</i> <i>Year 4/5: Aut3, Spr1</i>	<i>Year 4/5: Aut3, Spr1, Spr3</i> <i>Year 5/6: Aut2, Spr2</i>	<i>Year 5/6: Aut2</i>
Multiplication and Division: Written Calculations		<ul style="list-style-type: none"> calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), 	<ul style="list-style-type: none"> write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers 	<ul style="list-style-type: none"> multiply two-digit and three-digit numbers by a one-digit number using formal written layout 	<ul style="list-style-type: none"> multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for 	<ul style="list-style-type: none"> multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication

		division (\div) and equals (=) signs	times one-digit numbers, using mental and progressing to formal written methods		<p>two-digit numbers</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context divide numbers up to 4 digits 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
		<i>Year 1/2: Aut3, Spr1 Year 2/3: Aut3, Spr1</i>	<i>Year 2/3: Aut3, Spr1 Year 3/4: Aut3, Spr1</i>	<i>Year 3/4: Aut3, Spr1 Year 4/5: Aut3, Spr1</i>	<i>Year 4/5: Aut3, Spr1, Spr3 Year 5/6: Aut2, Spr2</i>	<i>Year 5/6: Aut2</i>
<p>Multiplication and Division:</p> <p>Properties of numbers (multiples, factors, primes,</p>				<ul style="list-style-type: none"> recognize and use factor pairs and commutativity in mental calculations 	<ul style="list-style-type: none"> identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. know and use the vocabulary of 	<ul style="list-style-type: none"> identify common factors, common multiples and prime numbers

square and cube numbers)					prime numbers, prime factors and composite (non-prime) numbers <ul style="list-style-type: none"> • establish whether a number up to 100 is prime and recall prime numbers up to 19 • recognize and use square numbers and cube numbers, and the notation for squared and cubed 	
				<i>Year 3/4: Aut3, Spr1</i> <i>Year 4/5: Aut3, Spr1</i>	<i>Year 4/5: Aut3</i> <i>Year 5/6: Aut2</i>	<i>Year 5/6: Aut2</i>
Multiplication and Division: Order of operations and mixed operations					<ul style="list-style-type: none"> • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning on the equals sign 	<ul style="list-style-type: none"> • use their knowledge of the order of operations to carry out calculations involving the four operations
					<i>Year 4/5: Aut3, Spr1</i> <i>Year 5/6: Aut2</i>	<i>Year 5/6: Aut2</i>
Multiplication and Division:			<ul style="list-style-type: none"> • estimate the answer to a calculation and use 	<ul style="list-style-type: none"> • estimate and use inverse operations to check answers to a calculation 		<ul style="list-style-type: none"> • use estimation to check answers to calculations and determine, in the

Inverse operations and checking answers			inverse operations to check answers			context of a problem, levels of accuracy
			<i>Year 2/3: Aut3, Spr1 Year 3/4: Aut3, Spr1</i>	<i>Year 3/4: Aut3, Spr1 Year 4/5: Aut3, Spr1</i>		<i>Year 5/6: Aut2</i>
Multiplication and Division: Problem Solving	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects 	<ul style="list-style-type: none"> solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates 	<ul style="list-style-type: none"> solve problems involving addition, subtraction, multiplication and division
	<i>Year 1/2: Aut3, Spr1, Sum5</i>	<i>Year 1/2: Aut3, Spr1 Year 2/3: Aut3, Spr1</i>	<i>Year 2/3: Spr1 Year 3/4: Spr1</i>	<i>Year 3/4: Aut3, Spr1 Year 4/5: Aut3, Spr1</i>	<i>Year 4/5: Aut3, Spr1 Year 5/6: Aut2</i>	<i>Year 5/6: Aut2</i>

Fractions: Count in fractional steps		<ul style="list-style-type: none"> Pupils should count in fractions up to 10, starting from any number and using the $\frac{1}{2}$ and $\frac{2}{4}$ equivalence on the number line 	<ul style="list-style-type: none"> count up and down in tenths 	<ul style="list-style-type: none"> count up and down in hundredths 		
		<i>Year 1/2: Spr5</i> <i>Year 2/3: Spr5</i>	<i>Year 2/3: Spr5</i> <i>Year 3/4: Spr4</i>	<i>Year 3/4: Spr4</i> <i>Year 4/5: Spr3</i>		
Fractions: Recognize and Write	<ul style="list-style-type: none"> recognize, find and name a half as one of two equal parts of an object, shape or quantity recognize, find and name a quarter as one of four equal parts of an object, shape or quantity 	<ul style="list-style-type: none"> recognize, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$ of a length, shape, set of objects or quantity 	<ul style="list-style-type: none"> recognize, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators recognize that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10. recognize and use fractions as numbers: unit fractions and non-unit fractions with small denominators 	<ul style="list-style-type: none"> recognize that hundredths arise when dividing an object by one hundred and dividing tenths by ten 	<ul style="list-style-type: none"> recognize and use thousandths and relate them to tenths, hundredths and decimal equivalents identify, write and name equivalent fractions of a given fraction, represented visually, including tenths and hundredths recognize mixed numbers and improper fractions and convert from one form to the other and write mathematical statements greater than 1 as a mixed number 	

	<i>Year 1/2: Spr5</i>	<i>Year 1/2: Spr5</i> <i>Year 2/3: Spr5</i>	<i>Year 2/3: Spr5</i> <i>Year 3/4: Spr3</i>	<i>Year 3/4: Spr4</i> <i>Year 4/5: Spr3</i>	<i>Year 4/5: Spr2</i> <i>Year 5/6: Aut3, Spr1,</i> <i>Sum4</i>	
Fractions: Compare Fractions		<ul style="list-style-type: none"> Recognize the equivalence of $1/2$ and $2/4$ 	<ul style="list-style-type: none"> recognize and show, using diagrams, equivalent fractions with small denominators compare and order unit fractions, and fractions with the same denominators 	<ul style="list-style-type: none"> recognize and show, using diagrams, families of common equivalent fractions 	<ul style="list-style-type: none"> compare and order fractions whose denominators are all multiples of the same number 	<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 fractions >1
		<i>Year 1/2: Spr5</i> <i>Year 2/3: Spr5</i>	<i>Year 2/3: Spr5</i> <i>Year 3/4: Spr3</i>	<i>Year 3/4: Spr3</i> <i>Year 4/5: Spr2</i>	<i>Year 4/5: Spr2</i> <i>Year 5/6: Aut3, Spr1,</i> <i>Sum4</i>	<i>Year 5/6: Aut3</i>
Fractions: Calculations		<ul style="list-style-type: none"> write simple fractions, for example: $\frac{1}{2}$ of $6 = 3$ 	<ul style="list-style-type: none"> add and subtract fractions with the same denominator within one whole (for example: $5/7 + 1/7 = 6/7$) 	<ul style="list-style-type: none"> add and subtract fractions with the same denominator 	<ul style="list-style-type: none"> add and subtract fractions with the same denominator and denominators that are multiples of the same number multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams 	<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 (for example, $\frac{1}{4} \times \frac{1}{2} = 1/8$) divide proper fractions by

						whole numbers (for example, $1/3 \div 2 = 1/6$)
		<i>Year 1/2: Spr5 Year 2/3: Spr5</i>	<i>Year 2/3: Spr5, Sum 4 Year 3/4: Sum3</i>	<i>Year 3/4: Spr3 Year 4/5: Spr2</i>	<i>Year 4/5: Spr2 Year 5/6: Aut3, Spr1, Sum4</i>	<i>Year 5/6: Aut3</i>
Fractions: Solve Problems			<ul style="list-style-type: none"> solve problems that involve all of the above 	<ul style="list-style-type: none"> 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 		
			<i>Year 2/3: Spr5, Sum4 Year 3/4: Sum3</i>	<i>Year 3/4: Spr3 Year 4/5: Spr2</i>		
Decimals: Recognize and Write				<ul style="list-style-type: none"> recognize and write decimal equivalents of any number of tenths or hundredths recognize and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ 	<ul style="list-style-type: none"> read and write decimal numbers as fractions (for example, $0.71 = 71/100$) recognize and use thousandths and relate them to tenths, hundredths and decimal equivalents 	<ul style="list-style-type: none"> identify the value of each digit in numbers given to three decimal places
				<i>Year 3/4: Spr4, Sum1 Year 4/5: Spr3, Sum1</i>	<i>Year 4/5: Spr3 Year 5/6: Spr2, Sum4</i>	<i>Year 5/6: Spr2</i>
Decimals: Compare				<ul style="list-style-type: none"> round decimals with one decimal place to the 	<ul style="list-style-type: none"> round decimals with two decimal places to the nearest whole 	

				<p>nearest whole number</p> <ul style="list-style-type: none"> compare numbers with the same number of decimal places up to two decimal places 	<p>number and to one decimal place</p> <ul style="list-style-type: none"> read, write, order and compare numbers with up to three decimal places 	
				<p><i>Year 3/4: Sum1</i> <i>Year 4/5: Sum1</i></p>	<p><i>Year 4/5: Spr3</i> <i>Year 5/6: Spr2, Sum4</i></p>	
<p>Decimals:</p> <p>Calculations & Problems</p>				<ul style="list-style-type: none"> find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths 	<ul style="list-style-type: none"> solve problems involving number up to three decimal places 	<ul style="list-style-type: none"> multiply and divide numbers by 10,100 and 1000 giving answers up to three decimal places multiply one-digit numbers with up to two decimal places by whole numbers use written division methods in cases where the answer has up to two decimal places solve problems which require answers to be rounded to specified degrees of accuracy
				<p><i>Year 3/4: Spr4</i> <i>Year 4/5: Spr3</i></p>	<p><i>Year 4/5: Spr3, Sum1</i></p>	<p><i>Year 5/6: Spr2</i></p>

					Year 5/6: Spr2, Spr3, Sum4	
Fractions, Decimals and Percentages				<ul style="list-style-type: none"> • solve simple measure and money problems involving fractions and decimals to two decimal places 	<ul style="list-style-type: none"> • recognize the percent symbol (%) and understand that percent related to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal • solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 	<ul style="list-style-type: none"> • associate a fraction with division and calculate decimal equivalents (for example, 0.375) for a simple fraction (for example, $\frac{3}{8}$) • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
				Year 3/4: Spr3, Spr4, Sum1 Year 4/5: Spr2, Spr3, Sum1	Year 4/5: Spr3 Year 5/6: Spr2, Sum4	Year 5/6: Spr2
Ratio and Proportion						<ul style="list-style-type: none"> • solve problems involving the relative sizes of two quantities where missing values can be

						<p>found by using integer multiplication and division facts</p> <ul style="list-style-type: none"> • solve problems involving the calculation of percentages (for example, of measures, and such as 15% of 360) 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
						Year 5/6: Spr1, Spr2
Algebra	<ul style="list-style-type: none"> • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing 	<ul style="list-style-type: none"> • recognize and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems 	<ul style="list-style-type: none"> • solve problems, including missing number problems 			<ul style="list-style-type: none"> • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically

	number problems such as $7 = _ - 9$					<ul style="list-style-type: none"> find pairs of numbers that satisfy an equation with two unknowns enumerate possibilities of combinations of two variables
	<i>Year 1/2: Aut2, Sum5</i>	<i>Year 1/2: Aut2 Year 2/3: Aut2</i>	<i>Year 2/3: Aut2, Sum 2 Year 3/4: Aut2</i>			<i>Year 5/6: Spr3</i>
Measures: Using Measures	<ul style="list-style-type: none"> compare, describe and solve problems for: <ul style="list-style-type: none"> * lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) * mass/weight (for example, heavy/light, heavier than, lighter than) * capacity and volume (for example, full/empty, more than, less than, half full, quarter full) * time (for example, quicker, slower, earlier, later) 	<ul style="list-style-type: none"> choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (liters/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$ 	<ul style="list-style-type: none"> measure, compare, add and subtract: lengths (m/cm/mm); mass (kg, g); volume/capacity (l/ml) 	<ul style="list-style-type: none"> convert between different units of measure (for example, kilometer to meter; hour to minute) estimate, compare and calculate different measures 	<ul style="list-style-type: none"> convert between different units of metric measure (for example, kilometer and meter; centimeter and millimeter; gram and kilogram; liter and milliliter) understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints use all four operations to solve problems involving measure (for example, length, mass, volume, 	<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 up to three decimal places

	<ul style="list-style-type: none"> measure and begin to record the following: lengths and heights mass/weight capacity and volume time (hours, minutes, seconds) 				money using decimal notation, including scaling)	<ul style="list-style-type: none"> convert between miles and kilometers
	<i>Year 1/2: Spr3, Sum2, Sum4</i>	<i>Year 1/2: Spr3, Sum4 Year 2/3: Spr3, Sum3</i>	<i>Year 2/3: Spr3, Sum3 Year 3/4: Spr2, Spr4</i>	<i>Year 3/4: Spr2, Sum2 Year 4/5: Aut4, Sum2</i>	<i>Year 4/5: Aut4, Sum6 Year 5/6: Spr4, Sum5</i>	<i>Year 5/6: Spr4</i>
Measurement: Money	<ul style="list-style-type: none"> recognize and know the value of different denominations of coins and notes 	<ul style="list-style-type: none"> recognize and use symbols for pounds (£) and pence (p); combine amounts to make a particular value find different combinations of coins that equal the same amounts of money solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change 	<ul style="list-style-type: none"> add and subtract amounts of money to give change, using both £ and p in practical contexts 	<ul style="list-style-type: none"> estimate, compare and calculate different measures, including money in pounds and pence 	<ul style="list-style-type: none"> use all four operations to solve problems involving measure (for example, money) 	
	<i>Year 1/2: Aut2</i>	<i>Year 1/2: Aut2 Year 2/3: Aut2</i>	<i>Year 2/3 – Aut2 Year 3/4: Sum1</i>	<i>Year 3/4: Sum1 Year 4/5: Sum1</i>	<i>Year 4/5: Sum1 Year 5/6: Spr3</i>	
Measurement: Time	<ul style="list-style-type: none"> sequence events in chronological order using language (for 	<ul style="list-style-type: none"> compare and sequence intervals of time 	<ul style="list-style-type: none"> tell and write the time from an analogue clock, including using 	<ul style="list-style-type: none"> read, write and convert time between analogue 	<ul style="list-style-type: none"> solve problems involving converting 	<ul style="list-style-type: none"> use, read, write and convert between standard units,

	<p>example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)</p> <ul style="list-style-type: none"> recognize and use language relating to dates, including days of the week, weeks, months and years tell the time to the hour and half past the hour and draw the hands on a clock face to show these times 	<ul style="list-style-type: none"> tell and write the time to five minutes, including quarter past/to the hour and draw hands on a clock face to show these times know the number of minutes in an hour and the number of hours in a day 	<p>Roman numerals from I to XII, and 12-hour and 24-hour clocks</p> <ul style="list-style-type: none"> estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight know the number of seconds in a minute and the number of days in each month, year and leap year compare durations of events (for example to calculate the time taken by particular events or tasks 	<p>and digital 12- and 24-hour clocks</p> <ul style="list-style-type: none"> solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days 	<p>between units of time</p>	<p>converting measurements of time from a smaller unit of measure to a larger unit, and vice versa</p>
	<i>Year 1/2: Sum2</i>	<i>Year 1/2: Sum2 Year 2/3: Sum1</i>	<i>Year 2/3: Sum1 Year 3/4: Sum2</i>	<i>Year 3/4: Sum2 Year 4/5: Sum2</i>	<i>Year 4/5: Sum2 Year 5/6: Spr4</i>	<i>Year 5/6: Sum4</i>
<p>Measurement: Perimeter, Area, Volume</p>			<ul style="list-style-type: none"> measure the perimeter of simple 2-D shapes 	<ul style="list-style-type: none"> measure and calculate the perimeter of a rectilinear figure (including squares) 	<ul style="list-style-type: none"> measure and calculate the perimeter of composite rectilinear 	<ul style="list-style-type: none"> recognize that shapes with the same areas can have different

				<p>in centimeters and meters</p> <ul style="list-style-type: none"> find the area of rectilinear shapes by counting squares 	<p>shapes in centimeters and meters</p> <ul style="list-style-type: none"> calculate and compare the area of rectangles (including squares), and including using standard units, square centimeters (cm²) and square meters (m²) and estimate the area of irregular shapes estimate volume (for example, using 1cm³ blocks to build cuboids, including cubes) and capacity (for example, using water) 	<p>perimeters and vice versa</p> <ul style="list-style-type: none"> recognize when it is possible to use formulae for area and volume of shapes calculate the area of parallelograms and triangles calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimeters (cm³) and cubic meters (m³) and extending to other units (for example, mm³ and km³)
			<i>Year 2/3: Spr4 Year 3/4: Spr2</i>	<i>Year 3/4: Spr2 Year 4/5: Aut4</i>	<i>Year 4/5: Aut4, Sum6 Year 5/6: Spr5</i>	<i>Year 5/6: Spr5</i>
<p>Geometry:</p> <p>2-D Shapes</p>	<ul style="list-style-type: none"> recognize and name common 2-D shapes (for example, rectangles (including squares), circles and triangles) 	<ul style="list-style-type: none"> identify and describe the properties of 2-D shapes, including the number of sides and line of symmetry in a vertical line 	<ul style="list-style-type: none"> draw 2-D shapes 	<ul style="list-style-type: none"> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes 	<ul style="list-style-type: none"> distinguish between regular and irregular polygons based on reasoning about equal sides and angles 	<ul style="list-style-type: none"> draw 2-D shapes using given dimensions and angles compare and classify geometric shapes based on

		<ul style="list-style-type: none"> identify 2-D shapes on the surface of 3-D shapes (for example, a circle on a cylinder and a triangle on a pyramid) compare and sort common 2-D shapes and everyday objects 		<ul style="list-style-type: none"> identify lines of symmetry in 2-D shapes presented in different orientations 	<ul style="list-style-type: none"> use the properties of rectangles to deduce related facts and find missing lengths and angles 	<p>their properties and sizes</p> <ul style="list-style-type: none"> illustrate and name
	<i>Year 1/2: Spr4</i>	<i>Year 1/2: Spr4</i> <i>Year 2/3: Spr4</i>	<i>Year 2/3: Spr4</i> <i>Year 3/4: Sum4</i>	<i>Year 3/4: Sum4</i> <i>Year 4/5: Sum4</i>	<i>Year 4/5: Sum4</i> <i>Year 5/6: Sum1</i>	<i>Year 5/6: Sum1</i>
Geometry: 3-D Shapes	<ul style="list-style-type: none"> recognize and name common 3-D shapes (for example, cuboids (including cubes), pyramids and spheres) 	<ul style="list-style-type: none"> recognize and name common 3-D shapes (for example, cuboids (including cubes), pyramids and spheres) compare and sort common 3-D shapes and everyday objects 	<ul style="list-style-type: none"> make 3-D shapes using modelling materials; recognize 3-D shapes in different orientations and describe them 		<ul style="list-style-type: none"> identify 3-D shapes, including cubes and other cuboids, from 2-D representations 	<ul style="list-style-type: none"> recognize, describe and build simple 3-D shapes, including making nets
	<i>Year 1/2: Spr4</i>	<i>Year 1/2: Spr4</i> <i>Year 2/3: Spr4</i>	<i>Year 2/3: Spr4</i> <i>Year 3/4: Sum4</i>		<i>Year 4/5: Sum4</i> <i>Year 5/6: Sum1</i>	<i>Year 5/6: Sum1</i>
Geometry: Angles & Lines			<ul style="list-style-type: none"> recognize angles as a property of shape or a description of a turn identify right angles, recognize that two right angles make a half-turn, three make three quarters of a turn 	<ul style="list-style-type: none"> identify acute and obtuse angles and compare and order angles up to two right angles by size identify lines of symmetry in 2-D shapes presented in different orientations 	<ul style="list-style-type: none"> know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles draw given angles, and measure them in degrees * identify: 	<ul style="list-style-type: none"> find unknown angles in any triangles, quadrilaterals, and regular polygons recognize angles where they meet at a point, are on a straight line, or are vertically opposite, and

			<p>and four a complete turn; identify whether angles are greater than or less than a right angle</p> <ul style="list-style-type: none"> identify horizontal and vertical lines and pairs of perpendicular and parallel lines 	<ul style="list-style-type: none"> complete a simple symmetric figure with respect to a specific line of symmetry 	<ul style="list-style-type: none"> * angles at a point and one whole turn (total 360°) * angles at a point on a straight line and ½ a turn (total 180°) * other multiples of 90° 	find missing angles
			<i>Year 2/3: Spr4</i> <i>Year 3/4: Sum4</i>	<i>Year 3/4: Sum4</i> <i>Year 4/5: Sum4</i>	<i>Year 4/5: Sum4</i> <i>Year 5/6: Sum1</i>	<i>Year 5/6: Sum1</i>
Geometry: Position & Direction	<ul style="list-style-type: none"> describe position, direction and movement, including whole, half, quarter and three-quarter turns 	<ul style="list-style-type: none"> order and arrange combinations of mathematical objects in patterns and sequences use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) 		<ul style="list-style-type: none"> describe positions on a 2-D grid as coordinates in the first quadrant describe movements between positions as translations of a given unit to the left/right and up/down plot specified points and draw sides to complete a given polygon 	<ul style="list-style-type: none"> 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 	<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
	<i>Year 1/2: Sum1</i>	<i>Year 1/2: Spr4, Sum1</i> <i>Year 2/3: Spr4</i>		<i>Year 3/4: Sum4</i> <i>Year 4/5: Sum5</i>	<i>Year 4/5: Sum5</i> <i>Year 5/6: Sum2</i>	<i>Year 5/6: Sum2</i>

Statistics: Present & Interpret		<ul style="list-style-type: none"> interpret and construct simple pictograms, tally charts, block diagrams and simple tables 	<ul style="list-style-type: none"> interpret and present data using bar charts, pictograms and tables 	<ul style="list-style-type: none"> interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs 	<ul style="list-style-type: none"> complete, read and interpret information in tables, including timetables 	<ul style="list-style-type: none"> interpret and construct pie charts and line graphs and use these to solve problems
		<i>Year 1/2: Spr2</i> <i>Year 2/3: Spr2</i>	<i>Year 2/3: Spr2</i> <i>Year 3/4: Sum3</i>	<i>Year 3/4: Sum3</i> <i>Year 4/5: Sum3</i>	<i>Year 4/5: Sum3</i> <i>Year 5/6: Spr6</i>	<i>Year 5/6: Spr6</i>
Statistics: Solve Problems		<ul style="list-style-type: none"> ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ask and answer questions about totaling and comparing categorical data 	<ul style="list-style-type: none"> solve one-step and two-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in scaled bar charts and pictograms and tables 	<ul style="list-style-type: none"> solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs 	<ul style="list-style-type: none"> solve comparison, sum and difference problems using information presented in a line graph 	<ul style="list-style-type: none"> calculate and interpret the mean as an average
		<i>Year 1/2: Spr2</i> <i>Year 2/3: Spr2</i>	<i>Year 2/3: Spr2</i> <i>Year 3/4: Sum3</i>	<i>Year 3/4: Sum3</i> <i>Year 4/5: Sum3</i>	<i>Year 4/5: Sum3</i> <i>Year 5/6: Spr6</i>	<i>Year 5/6: Spr6</i>