Curriculum Progression in Design and Technology

National Curriculum Focus

Purpose of Study	Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.
Aims	The national curriculum for mathematics aims to ensure that all pupils: *become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. * reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language * can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Key Stage One

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools]. At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

Year 1	Year 2	Cultural Capital
Pupils should be taught the following areas of mathematics: *Number and place value *Addition and subtraction *Multiplication and division *Fractions *Measurement *Geometry – properties of shapes *Geometry – position and direction	Pupils should be taught the following areas of mathematics: *Number and place value *Addition and subtraction *Multiplication and division *Fractions *Measurement *Geometry – properties of shapes *Geometry – position and direction *Statistics	STEM Day Friday 12th April – whole school World Maths Day 23rd March TT Rockstars Rock legends day

Lower key Stage 2

The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

Year 3	Year 4	Cultural Capital
Pupils should be taught the following areas of mathematics: *Number and place value *Addition and subtraction *Multiplication and division *Fractions *Measurement *Geometry – properties of shapes *Statistics	Pupils should be taught the following areas of mathematics: *Number and place value *Addition and subtraction *Multiplication and division *Fractions (including decimals) *Measurement *Geometry – properties of shapes *Geometry – position and direction *Statistics	STEM Day Friday 12th April – whole school World Maths Day 23rd March TT Rockstars Rock legends day

Upper Key Stage 2
The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio. At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly.

Year 5	Year 6	
Pupils should be taught the following areas of mathematics: *Number and place value *Addition and subtraction *Multiplication and division *Fractions (including decimals and percentages) *Measurement *Geometry – properties of shapes *Geometry – position and direction *Statistics	Pupils should be taught the following areas of mathematics: *Number and place value *Addition and subtraction *Multiplication and division *Fractions (including decimals and percentages) *Ratio and proportion *Algebra *Measurement *Geometry – properties of shapes *Geometry – position and direction *Statistics	STEM Day Friday 12th April – whole school World Maths Day 23rd March TT Rockstars Rock legends day

Links to EYFS
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.

Mathematics			
	0-3 Years (Daisies Class)	**3 – 4 Years (Daffodils Class)**	**Reception Children (Sunflowers Class)**
Autumn 1	• I can compare quantities up to 3 in different contexts (matching or sorting). • I can compare quantities up to 10 in different contexts (comparing size). • I can join in with number rhymes (counting patterns). • I can recite numbers up to 5. • I can show 'finger numbers' to 3. • I am beginning to compare size ('big'/'small', 'bigger'/'smaller', 'high'/'low', 'tall'/'heavy').	• I can recite numbers past 5. • I can say one number for each item in order (1, 2, 3). • I can show 'finger numbers' to 5. • I can link numerals and amounts (e.g. numeral 3 with 3 objects). • I can count by rote to 10. • I can compare quantities up to 5 in different contexts (matching). • I can compare quantities up to 5 in different contexts (sorting). • I can compare quantities up to 10 in different contexts (sequencing lengths, height, and size). • I can explore and represent AB patterns. • I have a deep understanding of numbers up to 5 (counting to 3). • I can link numerals and amounts (e.g. numeral 5 with 5 objects - up to 5). • I can describe and continue ABAB patterns.	• I can compare quantities up to 10 in different contexts (matching). • I can compare quantities up to 10 in different contexts (sorting). • I can compare quantities up to 10 in different contexts (sequencing lengths, height, size, time). • I can explore and represent patterns within numbers up to 10 (abstract, repeating, and non-linear). • I have a deep understanding of numbers up to 10 (counting to 5). • I have a deep understanding of numbers up to 10 (comparing within 5).
Autumn 2	• I can join in with number rhymes focusing on 5. • I can compare size ('big/small'). • I can recite numbers up to 3, focusing on 1:1 correspondence. • I react to a change of amounts in a group of 3. • I am developing counting-like behaviour (making sounds, pointing, or saying some numbers in sequence).	• I can link numerals and amounts. • I have a deep understanding of numbers up to 10 (representing numbers to 3). • I can subitise to count objects quickly. • I can automatically recite numbers past 5 • I can select shapes appropriately (e.g. flat surfaces for a building, a triangular prism for a roof). • I can combine shapes to make new ones (e.g. an arch, a bigger triangle). • I can understand position through words alone and no pointing.	• I can compare quantities up to 10 in different contexts (ordering events). • I have a deep understanding of numbers up to 10 (representing numbers to 5). • I can subitise to count objects quickly. • I can automatically recall number bonds to 5 (addition within 5). • I can identify and compare 2D shapes (triangles and squares). • I can identify and compare 2D shapes (circles and rectangles). • I can use positional language.
Spring 1	• I can say one number for each item in order: 1, 2, 3 (1:1 correspondence). • I know that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle). • I can count in everyday contexts, but sometimes I might skip a number. • I can compare amounts by saying, 'lots and more.'	• I can compare quantities using more than/fewer than. • I know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • I have a deep understanding of numbers up to 3, including the composition of each number. • I can compare quantities up to 5 and subitise up to 3.	• I have a deep understanding of numbers up to 10, including composition of each number. • I can notice numerical patterns, comparing quantities up to 10. • I have a deep understanding of numbers up to 10, including the composition of each number. • I can add amounts. • I can compare quantities up to 10 and subitise up to 5. • I can automatically recall number bonds up to 5.

			• I can automatically recall some number bonds to 10.
Spring 2	• I can explore 2D shapes and use them for a purpose. • I can match and sort colours. I can compare height ('tall' and 'short').	• I can make comparisons between objects relating to size, length, weight, and capacity. • I can talk about and explore 2D and 3D shapes (e.g. circles, rectangles, triangles, and cuboids) using informal and mathematical language (sides, corners, straight, flat, round). • I can describe a familiar route. • I can notice an error in a repeating pattern	• I can explore and represent patterns. • I can develop my spatial reasoning skills across all areas of mathematics, focusing on lengths and heights. • I can develop my spatial reasoning skills across all areas of mathematics, focusing on capacity. • I can develop my spatial reasoning skills across all areas of mathematics, focusing on 2D shapes. • I can develop my spatial reasoning skills across all areas of mathematics, focusing on 3D shapes.
Summer 1	• I can compare quantities. • I can recognise numerals up to 3. • I can understand position through words alone and no pointing. • I can talk about and identify patterns around me (e.g. stripes, blobs). • I can notice patterns and arrange things in a pattern.	• I am developing fast recognition of up to 3 objects, without having to count them individually ('subitising'). • I can link numerals and amounts (e.g. showing the right number of objects to match the numeral - up to 5). • I can say one number for each item in order (1, 2, 3, 4, 5).	• I can explore and represent patterns within numbers to 10 and compare quantities by counting on to add. • I can explore and represent patterns within numbers to 10 and compare quantities by counting forwards and backwards. • I have a deep understanding of numbers to 10 and can count to 20. • I can explore patterns within numbers to 10 and can double. • I can explore patterns within numbers to 10 and can halve and share. • I can explore patterns within numbers to 10, noticing odd and evens.
Summer 2	• I can build with a range of resources. • I can compare sizes, weight, and use gestures and language such as 'bigger'/'little'/'high'/'low'. • I can name basic 2D shapes. • I can understand position through words alone and no pointing. • I can combine objects for stacking to build models. • I can complete puzzles.	• I have a deep understanding of numbers to 5, including the composition of each number • I can name, sort, and compare basic 2D shapes. • I can discuss routes and locations, using words like 'in front of' and 'behind.' • I can talk about and identify patterns around me (e.g., stripes, blobs). • I can extend and create ABC patterns. • I can begin to describe a sequence of events using time vocabulary	• I can explore maths reasoning and understand shape, space, and measure. • I can explore maths reasoning and understand volume and capacity. • I can explore maths reasoning and understand the value of money. • I can explore maths reasoning and understand data. I have developed a strong grounding in number.

Early Learning Goal

Number:

- Have a deep understanding of number 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

- 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.

Streethay Primary School Progression in Number and Place Value					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
COUNTING					
count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number			count backwards through zero to include negative numbers	interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	use negative numbers in context, and calculate intervals across zero
count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward	count from 0 in multiples of 4, 8, 50 and 100;	count in multiples of 6, 7, 9, 25 and 1000	count forwards or backwards in steps of powers of 10 for any given number up to 1000 000	
given a number, identify one more and one less		find 10 or 100 more or less than a given number	find 1000 more or less than a given number		
COMPARING NUMBERS					
use the language of: equal to, more than, less than (fewer), most, least	to, more than, less than (fewer), most, least compare and order numbers from 0 up to 100; use and = signs	compare and order numbers up to 1000	order and compare numbers beyond 1000 Compare numbers with the same number of decimal places up to 2DP	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	read, write, order and compare numbers up to 10 000000 and determine the value of each digit
IDENTIFYING, REPRESENTING AND ESTIMATING NUMBERS					
identify and represent numbers using objects and pictorial representations including the number line	Identify, represent and estimate numbers using different representations, including the number line	Identify, represent and estimate numbers using different representations	Identify, represent and estimate numbers using different representations		

READING AND WRITING NUMBERS (INCLUDING ROMAN NUMERALS)					
read and write numbers from 1 to 20 in numerals and words.	read and write numbers to at least 100 in numerals and in words	read and write numbers up to 1000 in numerals and in words	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	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
		Tell and write the time from an analogue clock, including Roman Numerals		Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	
UNDERSTANDING PLACE VALUE					
Recognise the place value o	recognise the place value of each digit in a two-digit number (tens, ones)	recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
			Find the effect of dividing a 1 or 2-digit number by 10 and 100, identifying tenths, hundredths and thousandths	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
ROUNDING					
			round any number to the nearest 10, 100 or 1 000	round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000	round any whole number to a required degree of accuracy
			round decimals with one decimal place to the nearest whole number	round decimals with two decimal places to the nearest whole number and to one decimal place	solve problems which require answers to be rounded to specified degrees of accuracy

PROBLEM SOLVING					
	use place value and number facts to solve problems	solve number problems and practical problems involving these ideas.	solve number and practical problems that involve all of the above and with increasingly large positive numbers	solve number problems and practical problems that involve all of the above	solve number and practical problems that involve all of the above
KEY VOCABULARY					
numbers 0–10 digit count forwards count backwards ten frame even numbers odd numbers take away counting on counting back more than less than fewer as many as equal to greater, greatest smaller, smallest more, more than less, less than 1 more 1 less numbers 11–20 making 10 counting on from 10 in total altogether more, more than fewer, fewer than pattern, number pattern less than smaller, smallest greater, greatest 1 more 1 less growing pattern increasing, increases decreasing, decreases numbers 1–40 tens ones Count in tens. Count in ones. numbers 1–40 in numerals and words digit compare more than less than greatest smallest How many more? number pattern numbers 1–100 tens ones number bonds number bond diagram onesnumber bonds digit 2-digit number place-value chart number line more than less/fewer than smallest greatest pattern 100-square number chart forwards backwards greater smaller	numbers to 100 in numerals and in words counting forwards counting backwards counting in tens tens ones number bond, number bond diagram place-value chart number line greater, greatest smaller, smallest more than less than equal to approximate position tens ones place-value chart pairs 2 more 2 less 10 more 10 less counting on counting back increases, increasing decreases, decreasing number pattern, pattern 5 more 5 less 3 more 3 less 100-square	ones tens hundreds thousands equal to total number bond, number bond diagram 2-tiered part-whole diagram divided into equal parts 20s (twenties), 25s (twenty-fives) and 50s (fifties) place value place-value chart place-value cards greater/more than smaller/less than smaller, smallest greater, greatest estimate 50s (fifties) multiple number pattern 1 more 1 less 10 more 10 less 100 more 100 less fours eights 4 more 8 more	numbers to 1000 in numerals and in words tens twenty-fives fifties hundreds thousands numbers to 10000 in numerals and in words ones digit ones place tens place hundreds place thousands place place value number bonds greater than more than greatest smallest smaller than less than 100/10/1 more/less number pattern 1000 more than 1000 less than rounding the nearest 1000 exactly half way closer to round to the nearest 10, 100 or 1000 approximately equal to round to the nearest 10 estimate number line rounded to the nearest 10, nearest 100. approximate total mass	ones tens hundreds thousands ten thousands place value hundred thousands greatest smallest greater, greatest smaller, smallest greater than less than greater/more than ascending descending ten more/greater than fewer approximately number pattern increases decreases rounded to the nearest 10 000 approximate number approximately equal to rounded to the nearest 100 000 smallest/greatest possible number rounded to the nearest 100, 1000, 10 000 and 100 000 approximate	ones tens hundreds thousands ten thousands hundred thousands millions place value greatest smallest greater than less than largest greater, greatest smaller, smallest estimate rounded to the nearest 1 000 000 approximate, approximately rounded to the nearest 1 000 000, 100 000, 10 000, 1000 and 100

Streethay Primary School Progression in Addition and Subtraction					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NUMBER BONDS					
represent and use number bonds and related subtraction facts within 20	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100				
MENTAL CALCULATION					
Add and subtract one-digit and two-digit numbers to 20, including zero	add and subtract numbers using concrete objects, pictorial representations, and mentally, including: * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers	add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds		add and subtract numbers mentally with increasingly large numbers	perform mental calculations, including with mixed operations and large numbers
read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot				use their knowledge of the order of operations to carry out calculations involving the four operations
WRITTEN METHODS					
read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	Add and subtract numbers with two digits	add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS					
	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	estimate the answer to a calculation and use inverse operations to check answers	estimate and use inverse operations to check answers to a calculation	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

PROBLEM SOLVING					
solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ∗ - 9	solve problems with addition and subtraction: * using concrete objects and pictorial representations, including those involving numbers, quantities and measures * applying their increasing knowledge of mental and written methods	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.				Solve problems involving addition, subtraction, multiplication and division
KEY VOCABULARY					
number bond How many? break apart the same as part, part, whole greater smaller number story umber sentence part, part, whole number bond, number bond diagram plus sign plus add equals equals sign addition equation addition fact altogether count on, counting on addition greater number in total altogether addition story How many are left? crossing out taking away subtraction equation number sentence minus subtract equals number bond, number bond diagram part, part, whole count back, counting backwards subtraction number/subtraction story number/subtraction sentence addition story addition fact subtraction fact addition and subtraction fact family	altogether ones tens ___ and ___ make ___. addition equation counting on (in ones) add add the ones add the tens plus equals number line number bond, number bond diagram breaking up/partitioning a number column, column method total renaming rename 10 ones as 1 ten column method addition equation counting back taking away ones tens subtract subtract the ones subtract the tens minus left equals number bond, number bond diagram breaking up/partitioning a number making 10 double more word problem bar model altogether the rest total less fewer equation addition subtraction guess-and-check difference sum	sum addend subtrahend difference minuend count on 1 more hundreds tens ones 10 more 100 more ones column tens columns hundreds column column addition renaming making 10 number bonds in total making 100 estimate approximate approximation renaming 10 ones to 1 ten and ten 10s to 1 hundred ___ ones + ___ ones = ___ ones ___ tens + ___ tens = ___ tens ___ hundreds + ___ hundreds = ___ hundreds renaming 10 tens to 1 hundred renaming 10 ones to 1 ten count back in ones 1 less number bond count back in tens 10 less count back in hundreds 100 less subtract ones subtract tens Subtract hundreds rename place-value columns bar model labels part-whole bar model equation comparison model	add sum total how many are there altogether? base 10 materials place-value counters ones tens hundreds renaming place value thousands rename estimate approximately round to the nearest 100 round to the nearest 1000 find the sum how much altogether? calculate mentally make 10 make 100 calculate calculation equation mentally 1 less/2 less/ 3 less round method difference find the difference subtract addition check word problem understand the problem form a plan action the plan check the answer altogether	ones tens hundreds thousands ten thousands hundred thousands place value counting on approximate rounding to the nearest 10 000 rename/renaming approximate/approximately rounded to the nearest 1000 estimation/estimate round to the nearest 10 000 count back difference altogether total rename	operation calculation add/addition subtract/subtraction mixed operation calculation bracket partition estimate ones tens hundreds thousands ten thousands hundreds thousands digit approximately equal to expression reasonable guess 4-digit number bar model understand the problem form a plan action a plan unit addition subtraction check the answer left over facts equal number odd even

Streethay Primary School Progression in Multiplication and Division					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
MULTIPLICATION AND DIVISION FACTS					
count in multiples of twos, fives and tens	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward	count from 0 in multiples of 4, 8, 50 and 100	count in multiples of 6, 7, 9, 25 and 1 000	count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	
	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	recall multiplication and division facts for multiplication tables up to 12 × 12		
MENTAL CALCULATION					
		write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times onedigit numbers, using mental and progressing to formal written methods	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	multiply and divide numbers mentally drawing upon known facts	perform mental calculations, including with mixed operations and large numberS
	show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot		recognise and use factor pairs and commutativity in mental calculations	multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3 /8)
WRITTEN CALCULATION					
	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	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	multiply two-digit and three-digit numbers by a onedigit number using formal written layout	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	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication

				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	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
PROPERTIES OF NUMBERS, MULTIPLES, FACTORS, PRIMES, SQUARE AND CUBE NUMBERS					
			recognise and use factor pairs and commutativity in mental calculations (repeated)	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19	Identify common factors, common multiples and prime numbers Use common factors to simplify fractions and express them as the same denominator.
				recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3	calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm 3) and cubic metres (m 3), and extending to other units such as mm 3 and km 3
ORDER OF OPERATIONS					
					use their knowledge of the order of operations to carry out calculations involving the four operation
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS					
		Estimate the answer to a calculation and use inverse operations to check answers	estimate and use inverse operations to check answers to a calculation		use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy

PROBLEM SOLVING					
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	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	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	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	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	solve problems involving addition, subtraction, multiplication and division
KEY VOCABULARY					
	total equal groups groups of times equals multiply multiplication sign altogether How many groups? How many in each group? counting in twos equation, multiplication equation multiplication equation double counting in fives counting in tens equal to array division equation	groups of equal groups addition multiplication equation doubling one group less one more group counting in eights 3 equal groups groups of 3 multiplication and division fact family 4 equal groups groups of 4 8 equal groups groups of 8 ___ groups of ___ divide into equal groups twice as many four times as many counting in tens counting in twenties multiplying ones multiplying tens rename a 2-digit number as tens and ones number bonds product rename 10 ones as 1 ten showing 2-digit numbers using base 10 materials dividing ones dividing tens divisor multiples of 10 number bond 2 times as many twice as many equal parts 1 unit	count on sixes sevens nines multiple multiply times table number pattern multiple repeated addition threes double commutativity half sharing grouping division divide quotient dividend divisor divided by equal groups inverse multiplication and division fact family remainder odd even multiplication add subtract combinations possibilities guess and check method multiply multiplication product zero decrease multiplication story divide division dividend divisor quotient commutative commutativity multiple of 10 ten times greater than method tens repeated addition ones partition place value renaming multiple of 100 hundreds 100 times greater than mass distance price hundred sharing grouping repeated subtraction remainder equation word problem understand the problem form a plan action the plan check the answer ___ times as much unit volume bar model __times as much	ones tens hundreds thousands ten thousands hundred thousands place value counting on approximate rounding to the nearest 10 000 rename/renaming approximate/approximately rounded to the nearest 1000 estimation/estimate round to the nearest 10 000 count back difference altogether total rename multiple factor common factor prime number composite number even number odd number rectangular/square arrangements two squared (2^2) square number cube number squared ^{2} cubed ^{3} greater than product estimate double greatest product estimate/estimation grid/grid method halve approximately equal to greatest/smallest product left over/remainder partition remainder	operation calculation multiply/multiplication divide/division mixed operation calculation bracket multiply product partition estimate ones tens hundreds thousands ten thousands hundreds thousands digit multiple of 10 double half ten approximately equal to expression reasonable guess 4-digit number greatest possible product smallest possible product divide quotient bar model divides equally groups of remainder repeated division method calculate division divided word problem understand the problem form a plan action a plan unit multiplication word problem check the answer left over multiple common multiple multiplication facts equal number lowest common multiple factor common factor greatest common factor array even numbers whole numbers prime numbers composite number odd even

Streethay Primary School Progression in Fraction, Decimals and Percentages					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
COUTNING IN FRACTIONAL STEPS					
	Pupils should count in fractions up to 10, starting from any number and using the1/2 and 2/4 equivalence on the number line (Non Statutory Guidance)	count up and down in tenths	count up and down in hundredths		
RECOGNISING FRACTIONS					
recognise, find and name a half as one of two equal parts of an object, shape or quantity recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	recognise, find, name and write fractions $^{1}/_{3}$, $^{1}/_{4}$, $^{2}/_{4}$ and $^{3}/_{4}$ of a length, shape, set of objects or quantity	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10. recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (appears also in Equivalence)	
COMPARING FRACTIONS					
		compare and order unit fractions, and fractions with the same denominators		compare and order fractions whose denominators are all multiples of the same number	compare and order fractions, including fractions >1
			compare numbers with the same number of decimal places up to two decimal places	read, write, order and compare numbers with up to three decimal places	identify the value of each digit in numbers given to three decimal places

ROUNDING INCLUDING DECIMALS					
			round decimals with one decimal place to the nearest whole number	round decimals with two decimal places to the nearest whole number and to one decimal place	solve problems which require answers to be rounded to specified degrees of accuracy
EQUIVALENCE					
	write simple fractions e.g. $^1/_2$ of 6 = 3 and recognise the equivalence of $^2/_4$ and $^1/_2$.	recognise and show, using diagrams, equivalent fractions with small denominators	recognise and show, using diagrams, families of common equivalent fractions	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	use common factors to simplify fractions; use common multiples to express fractions in the same denomination
			recognise and write decimal equivalents of any number of tenths or hundredths	read and write decimal numbers as fractions (e.g. 0.71 = $^{71}/_{100}$) recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$)
			recognise and write decimal equivalents to $^1/_4$; $^1/_2$; $^3/_4$	recognise the per cent symbol (%) and understand that per cent relates to “number of parts per hundred”, and write percentages as a fraction with denominator 100 as a decimal fraction	recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
ADDITION AND SUBTRACTION OF FRACTIONS					

		add and subtract fractions with the same denominator within one whole (e.g. $^{5}/_{7} + {}^{1}/_{7} = {}^{6}/_{7}$)	add and subtract fractions with the same denominator	add and subtract fractions with the same denominator and multiples of the same number recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $^{2}/_{5} + {}^{4}/_{5} = {}^{6}/_{5} = 1{}^{1}/_{5}$)	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
MULTIPLICATION AND DIVISION OF FRACTIONS					
				multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $^{1}/_{4} \times {}^{1}/_{2} = {}^{1}/_{8}$) multiply one-digit numbers with up to two decimal places by whole numbers
					divide proper fractions by whole numbers (e.g. $^{1}/_{3} \div 2 = {}^{1}/_{6}$)
MULTIPLICATION AND DIVISION OF DECIMALS					
					multiply one-digit numbers with up to two decimal places by whole numbers
			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		multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
					identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places

					associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^{3}/_{8}$)
					use written division methods in cases where the answer has up to two decimal places
PROBLEM SOLVING					
		solve problems that involve all of 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	solve problems involving numbers up to three decimal places	
			solve simple measure and money problems involving fractions and decimals to two decimal places.	solve problems which require knowing percentage and decimal equivalents of $^{1}/_{2}$, $^{1}/_{4}$, $^{1}/_{5}$, $^{2}/_{5}$, $^{4}/_{5}$ and those with a denominator of a multiple of 10 or 25.	
KEY VOCABULARY					

whole half/halves share equally equal parts quarter/quarters fourths	equal parts one half halves whole one quarter one fourth fraction three quarters three fourths one third numerator denominator unit fraction thirds quarters half quarter	fraction whole tenth division divide share whole number set part equivalent numerator denominator greater (than) less (than) smaller addition sum subtraction left/remaining	hundredths fraction part whole number line count in hundredths count back tenths eighths mixed number whole number proper fraction improper fraction count in eighths thirds quarters fifths count on numerator denominator equivalent compare simplify add sum >, ones tenths decimal decimal point ones/wholes mixed number hundredths tens number pattern greater than less than approximately equal to round down round up numerator denominator equivalent fractions tenths decimal decimal point decimal place pounds pence hundredths greater than less than round down round up estimate	mixed number whole number proper fraction improper fraction numerator denominator division equal pieces equally whole quarters fifths equivalent equal parts equivalent fractions half quarter sixth hundredth divide into common denominator compare order greatest smallest less than equal number pairs fractions share equally add fraction simplify sum find the difference subtract ___ times as much multiply tenths hundredths thousandths decimal decimal point hundredths thousandths greater than smaller/less than less than greatest smallest lightest longer/longest fraction numerator denominator equivalent value total difference ones column method decimal place perimeter estimate round/rounded/rounding er cent percentage fraction hundredth decimal	fractions numerator denominator equal parts equivalent simplify common factor in its simplest form fraction proper fraction compare bar model order greatest smallest improper fraction lowest common multiple common denominator mixed number greater than decimal ones tenths hundredths thousandths place value metres kilograms litres mass fraction kilometres distance simplest form approximate position decimal place decimal point approximately equal to renaming multiply 3 times greater number bonds long division divide divided equally regrouping percentage percentage change round greater than less than

Streethay Primary School Ratio and Proportion					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
RATIO AND PROPORTION					
					solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
					solve problems involving the calculation of percentages [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
KEY VOCABULARY					
					simplified ratio simplified

Streethay Primary School Progression in Measurement					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
COMPARING AND ESTIMATING					
compare, describe and solve practical problems for: * lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] * mass/weight [e.g. heavy/light, heavier than, lighter than] * capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] * time [e.g. quicker, slower, earlier, later]	compare and order lengths, mass, volume/capacity and record the results using >, < and =		estimate, compare and calculate different measures, including money in pounds and pence (also included in Measuring)	calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm 2) and square metres (m 2) and estimate the area of irregular shapes (also included in measuring) estimate volume (e.g. using 1 cm 3 blocks to build cubes and cuboids) and capacity (e.g. using water)	calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm 3) and cubic metres (m 3), and extending to other units such as mm 3 and km 3 .
sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	compare and sequence intervals of time	compare durations of events, for example to calculate the time taken by particular events or tasks			
		estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight			
MEASURING AND CALCULATING					
measure and begin to record the following: * lengths and heights * mass/weight * capacity and volume * time (hours, minutes, seconds)	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	estimate, compare and calculate different measures, including money in pounds and pence	use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate

		measure the perimeter of simple 2-D shapes	measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	recognise that shapes with the same areas can have different perimeters and vice versa
recognise and know the value of different denominations of coins and notes	recognise and know the value of different denominations of coins and notes 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	add and subtract amounts of money to give change, using both £ and p in practical contexts			
			find the area of rectilinear shapes by counting squares	calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm 2) and square metres (m 2) and estimate the area of irregular shapes recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)	calculate the area of parallelograms and triangles calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm 3) and cubic metres (m 3), and extending to other units [e.g. mm 3 and km 3]. recognise when it is possible to use formulae for area and volume of shapes
TELLING THE TIME					
tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times	tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	read, write and convert time between analogue and digital 12 and 24-hour clocks		

recognise and use language relating to dates, including days of the week, weeks, months and years	know the number of minutes in an hour and the number of hours in a day.	estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight			
			solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days	solve problems involving converting between units of time	
CONVERTING					
	know the number of minutes in an hour and the number of hours in a day.	know the number of seconds in a minute and the number of days in each month, year and leap year	convert between different units of measure (e.g. kilometre to metre; hour to minute)	convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
			read, write and convert time between analogue and digital 12 and 24-hour clocks	solve problems involving converting between units of time	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
			solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days	understand and use equivalences between metric units and common imperial units such as inches, pounds and pints	convert between miles and kilometres

KEY VOCABULARY					
height length tall, taller, tallest short, shorter, shortest long, longer, longest measure, measuring width wide long tall width wide unit(s) centimetre(s time hour hand minute hand o'clock morning afternoon evening night half past first next before after second minute hour day week lasts duration quicker slower earlier later days of the week months of the year weekday weekend month year last coins pound coin penny coin pounds pence value notes volume full half full empty more than less than compare capacity container unit liquid fill half as much half quarter measure heavy light heavier than lighter than as heavy as mass balance scale unit lighter heavier more than less than measure compare	metre unit more than less than longer shorter centimetre longest shortest greater than estimate centimetres sum difference bar model addition multiplication wide width long length total metres kilogram/kg mass weight balance scales dial scales digital scales pointer more than less than about heavier lighter grams/g as heavy as heavier than lighter than compare weighs kilograms/kg heaviest lightest add subtract total bar model/model group equal multiply divide single hotter/hottest colder/coldest more than/less than/equal to temperature degrees Celsius money penny pence pound p £ note coin amount more greater equal fewer less count count on enough correct exchange same total value compare costs arrange order least total cost buy pay change spent left check solve more than less than altogether cost spend possible share equally explain name show calculate minute hand hour hand ___ o'clock ___ minutes past ___ after half past ___ quarter past ___ ___ minutes to ___ before quarter to ___ morning afternoon evening earliest latest first next last ___ o'clock half past duration ___ o'clock greater longer most least volume greatest least greater than less than 1 unit/units litre (l) more than millilitre capacity litre	length centimetres metres measure unit of measurement millimetres distance converting metres to centimetres converting centimetres to metres 3 times 4 times 5 times units long division number bond 4 times as high bar model division multiplication mass heavy/heavier/heaviest light/lighter/lightest scales weigh kilograms/kg grams/g 200-g mass estimate total mass word problem bar model addition subtraction twice as much ___ times the mass multiplication division volume millilitres/ml litres/l measure liquid capacity container bar model less than more than (twice) as much as three times as much amount count on pounds pence coins notes money total add column method price greater subtract difference more more (than) change bar model less morning evening afternoon night a.m. p.m. midnight noon hour hand o'clock minute past to Roman numerals second duration start time end time calendar day week month year leap year	time 12-hour clock 24-hour clock a.m. p.m. midnight midday noon departure time arrival time start time end time minutes/min hours/h seconds/s duration estimate convert seconds/sec days weeks months years metre centimetre decimal kilometre estimate gram millilitre litre centimetre metre perimeter quadrilateral rectangle area square units length breadth	centimetre millimetre metre kilometre mass gram kilogram volume litre millilitre inch foot/feet yard mile ounce pound pint gallon pounds day hour minutes second temperature degrees Celsius thermometer volume cubic units cubic centimetre cubic metre cuboid length breadth height litre millilitre capacity	length breadth perimeter area perpendicular base height formula parallel parallelogram cube cuboid volume cubic centimetre length breadth height cubic metre cubic millimetre units of measurement millimetres centimetres convert compare divide by 10 multiply by 10 length width perimeter metres divide by 100 multiply by 100 kilometres divide by 1000 multiply by 1000 distance miles multiply by 1.6 multiply by 0.62 approximately equal grams kilograms mass millilitres litres hours minutes seconds decimal fraction multiply divide time

Streethay Primary School Progression in Geometry: Properties of Shapes					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
IDENTIFYING SHAPES AND THEIR PROPERTIES					
recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [e.g. rectangles (including squares), circles and triangles] * 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].	identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces identify 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid).		identify lines of symmetry in 2-D shapes presented in different orientations	identify 3-D shapes, including cubes and other cuboids, from 2-D representations	recognise, describe and build simple 3-D shapes, including making nets illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
DRAWING AND CONSTRUCTING					
		draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	complete a simple symmetric figure with respect to a specific line of symmetry	draw given angles, and measure them in degrees (o)	draw 2-D shapes using given dimensions and angles draw 2-D shapes using given dimensions and angles
COMPARING AND CLASSIFYING					
	compare and sort common 2-D and 3-D shapes and everyday objects		compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	use the properties of rectangles to deduce related facts and find missing lengths and angles distinguish between regular and irregular polygons based on reasoning about equal sides and angles	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons

ANGLES					
		recognise angles as a property of shape or a description of a turn		know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	
		identify right angles, recognise that two right angles make a halfturn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle	identify acute and obtuse angles and compare and order angles up to two right angles by size	identify: * angles at a point and one whole turn (total 360 o) * angles at a point on a straight line and ½ a turn (total 180 o) * other multiples of 90	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
		identify horizontal and vertical lines and pairs of perpendicular and parallel line			
KEY VOCABULARY					
3D shape cube cuboid sphere pyramid solid object 2D shape circle square triangle rectangle corners sides pattern	cube cuboid sphere face surface cylinder cone prism pyramid edge vertex vertices size orientation	straight line point angle right angle perpendicular parallel horizontal vertical two-dimensional shape cm quadrilateral three dimensional prism edge end face vertices cube cuboid 2D shape length total side cm perimeter square rectangle	angle right angle acute angle obtuse angle quadrilateral equilateral triangle isosceles triangle scalene triangle parallel square rectangle rhombus parallelogram trapezium kite symmetrical line of symmetry regular	acute angle right angle obtuse angle reflex angle protractor degrees vertex quadrilateral rectangle square parallel internal angle external angle diagonal polygon regular polygon irregular polygon triangle equilateral triangle pentagon decagon rectangle square perimeter length breadth area square centimetre square metre right angle parallel perpendicular estimate square unit scale scale drawing	length breadth perimeter area perpendicular base height formula parallel parallelogram vertically opposite angles ratio equilateral triangle isosceles triangle quadrilateral pentagon hexagon polygon regular polygon radius diameter circumference parallel parallelogram rhombus trapezium scale similar triangle cuboid prism triangular prism net face triangle-based pyramid square-based pyramid cone

Streethay Primary School Progression in Geometry: Position and Direction					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
POSITION, DIRECTION AND MOVEMENT					
describe position, direction and movement, including half, quarter and three-quarter turns	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)		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	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	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.
PATTERN					
	order and arrange combinations of mathematical objects in patterns and sequences				
KEY VOCABULARY					
first/1st second/2nd third/3rd fourth/4th fifth/5th sixth/6th seventh/7th eighth/8th ninth/9th tenth/10th before after last between left right next to from top middle bottom position above below between behind in front of next to to the left of to the right of far from ground floor first floor top floor up down forwards backwards outside inside whole turn half turn quarter turn three-quarter turn direction clockwise anticlockwise	side triangle square rectangle quadrilateral vertex vertices polygon line of symmetry symmetrical symmetry symmetric orientation pattern even odd 4 steps left 3 steps right 2 steps up 1 step down full turn half turn quarter turn three-quarter turn clockwise anticlockwise	straight line angle point amount of turn right angle shape sides acute angle obtuse angle turn quarter half three quarters clockwise anticlockwise	x-axis y-axis coordinates vertex isosceles triangle right-angled triangle scalene triangle translation	x-axis y-axis coordinates x-coordinate y-coordinate translation/translate reflection/reflect mirror line image horizontal vertica	negative number the origin x-axis y-axis coordinates x-coordinate y-coordinate quadrilateral parallelogram trapezium rhombus kite isosceles triangle equilateral triangle translation reflection mirror line object image

Streethay Primary School Progression in Statistics					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
INTERPRETING, CONSTRUCTING AND PRESENTING DATA					
	interpret and construct simple pictograms, tally charts, block diagrams and simple tables	Interpret and present data using bar charts, pictograms and tables	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	complete, read and interpret information in tables, including timetables	interpret and construct pie charts and line graphs and use these to solve problems
	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 totalling and comparing categorical data				
SOLVING PROBLEMS					
		solve one-step and twostep questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	solve comparison, sum and difference problems using information presented in a line graph	calculate and interpret the mean as an average
KEY VOCABULARY					
	picture graph pictogram most/least/as many as more than/fewer than tally chart greatest number smallest number more than/fewer than/as many as block diagram greatest smallest more less fewer more than less than fewer than more/less/as many as table more/most fewer/fewest	data pictogram scale tally chart bar graph	table pictogram bar graph information scale x and y axes greatest more fewer, fewest fewest highest lowest line graph predict increase decrease least	x-axis y-axis coordinates x-coordinate y-coordinate translation/translate reflection/reflect mirror line image horizontal vertical	average mean mode median bar chart equal parts pie chart segment percentage vertically opposite angles right angle line graph average speed revenue mile kilometre round

Streethay Primary School Progression in Algebra					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
EQUATIONS					
solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ∗ - 9	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. solve problems, including missing number problems, involving multiplication and division, including integer scaling		use the properties of rectangles to deduce related facts and find missing lengths and angles	express missing number problems algebraically
	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100				find pairs of numbers that satisfy number sentences involving two unknowns
represent and use number bonds and related subtraction facts within 20					enumerate all possibilities of combinations of two variables
FORMULAE					
			Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit.		use simple formulae recognise when it is possible to use formulae for area and volume of shapes
KEY VOCABULARY					
					to stand for consecutive algebraic expression input number output number substitute evaluate formula formulae stands for equation variable