Maths Progression at St. Andrew's Methodist EYFS		
	Nursery	**Reception**
Number-counting	• Take part in finger rhymes with numbers (birth to 3) • Recite numbers past 5 (3 & 4 year olds) • Rote count back from 5 to 1 or 0 (3 & 4 year olds) • Counting objects • Counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence (birth to 3) • Understand that counting is to find out how many (birth to 3) Say one number for each item in order: 1, 2, 3, 4, 5 (3 & 4 year olds) • Know the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle') (3 & 4 year olds) • Count in everyday contexts, sometimes skipping numbers – '1-2-3-5' (birth to 3) Count reliably up to 5 in everyday contexts (3 & 4 year olds) • Show 'finger numbers' up to 5 (3 & 4 year olds) • Understand and use conservation of number (3 & 4 year olds) • Use the word 'zero' to represent 'none' (3 & 4 year olds) • Compare amounts, saying 'lots', 'more' or 'same' (birth to 3) Compare quantities using language: 'more than', 'fewer than' (3 & 4 year olds) • Fast recognition of up to 3 objects, without having to count them individually (subitising) (3 & 4 year olds) • Solve real world mathematical problems with numbers up to 5 (3 & 4 year olds)	• Rote count from 1 • Rote count on from a given number between 1 and 20 • Rote count back from 20 to 0 • Rote count back from a given number between 0 and 20 • Know what number comes before or after a given number • Say a number between two given numbers • Rote count beyond 20 Counting objects • Understand that counting is to find out how many Use one to one correspondence when counting • Understand the last number said is the number in the set • Count up to 20 objects, pictures, sounds and actions • Understand and use conservation of number • Use the word 'zero' to represent 'none' • Compare two sets of different objects saying which set is more, greater, fewer, less, same, equal • Order three or more sets of objects State without counting (subitise) quantities within 5 • Make a sensible guess of quantities within 10
Number- calculating	• React to changes of amount in a group of up to three items (birth to 3) Understand the concept of addition by practically combining sets of objects to find how many (3 & 4 year olds) • Understand the concept of subtraction by practically removing one amount from within another to find how many are left (3 & 4 year olds) • In real life contexts find one more and one less than a given number (3 & 4 year olds) • In real life contexts add two single-digit numbers totalling within	• Understand the concept of addition by practically combining sets of objects to find how many and use the terminology part – part – whole Understand the concept of subtraction by practically removing one amount from within another to find how many are left and use the terminology part – part – whole • Relate subtraction to addition in practical situations using the terminology part – part – whole • Identify one more and one less than a given number Identify two more and two less than a given number

	5, using practical equipment (3 & 4 year olds) ● In real life contexts subtract a single-digit number from a number up to 5, using practical equipment (3 & 4 year olds)	● Add two single-digit numbers totalling up to 10, using practical equipment ● Add two single-digit numbers totalling greater than 10, using practical equipment ● Subtract a single-digit number from a number up to 10, using practical equipment. ● Subtract a single-digit number from a number greater than 10, using practical equipment ● Automatically recall addition and subtraction facts up to 5 and some addition and subtraction facts to 10
Number- number sense	● Partition a set of objects in different ways (3 & 4 year olds) ● Know that numbers greater than 1 can be made in different ways ● (3 & 4 year olds)	● Partition a set of objects in different ways using the terminology part - part - whole ● Explore and represent the patterns in odd and even numbers Understand that 'teen' numbers are a group of 10 plus another number ● Understand 20 is the same as two groups of 10 ● Recognise repeating patterns in the counting sequence i.e. 6, 7, 8, 9 and 16, 17, 18, 19 and 26, 27, 28, 29 etc.
Number-number recognition	● Recognise and identify numerals 0 to 5 (3 & 4 year olds) ● Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5 (3 & 4 year olds)	● Recognise and identify numerals 0 to 20 ● Select the numeral that represents a set of objects ● Order numerals 0 to 20
Number- graphics	● Experiment with their own symbols and marks as well as numerals (3 & 4 year olds) ● Represent and explain their thinking in their own ways (birth to 3)	● Represent amounts in their own ways, explaining what they mean ● Represent and explain their thinking in their own ways
Shape	● Combine objects like stacking blocks and cups (birth to 3) ● Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round' (3 & 4 year olds) ● Know that shapes can appear in different ways and be different sizes (3 & 4 year olds) ● Build with a range of resources (birth to 3) ● Combine shapes to make new ones – an arch, a bigger triangle etc. (3 & 4 year olds)	● Know that shapes can appear in different ways and be different sizes Build and make models with 3-D shapes ● Create and describe pictures using 2-D shapes ● Name common 2-D shapes (circle, triangle, square rectangle, oblong rectangle) ● Name common 3-D shapes (sphere, cube, cuboid) ● Talk about shapes using mathematical language (straight, curved, sides, flat, solid) Sort shapes according to their own criteria
Space	● Put objects inside others and take them out again (birth to 3) ● Climb and squeezing selves into different types of spaces (birth to 3) Understand position through words alone – for example, "The bag is under the table," – with no pointing (3 & 4 year olds) ● Describe a familiar route (3 & 4 year olds) ● Notice patterns and arrange things in patterns (birth to 3)	● Understand and use positional language in everyday situations ● Understand and use ordinal numbers when describing position ● Understand and use the language of movement/direction ● Describe and recognise patterns made of objects, numbers and shapes ● Create patterns made of objects, numbers and shapes

	• Talk about and identify the patterns around them. For example, stripes on clothes, designs on rugs and wallpaper. • Extend and create ABAB patterns – stick, leaf, stick, leaf (3 & 4 year olds) Notice and correct an error in a repeating pattern (3 & 4 year olds)	
Measurement	• Describe and compare sizes using gesture and language – 'bigger/little/smaller', 'high/low', 'tall', (birth to 3) • Make comparisons between objects relating to size, length and height e.g. longer / shorter; wider / narrower; taller / shorter (3 & 4 year olds) • Find an object of similar length/width/height (3 & 4 year olds) • Weight Describe and compare weights using gesture and language – 'heavy' (birth to 3) • Make comparisons between objects relating to weight e.g. heavier/lighter (3 & 4 year olds) • Volume/capacity Use language of full and empty to describe the amount in different containers (birth to 3) • Make comparisons between objects relating to capacity e.g. more/less (3 & 4 year olds) • Money Understand that we need to pay for goods (3 & 4 year olds) • Talk about things they want to spend their money on (3 & 4 year olds) • Talk about different ways we can pay for things (3 & 4 year olds) • Recognise that there are different coins and notes (3 & 4 year olds) • Time Talk about significant times of the day, e.g. home time, lunch time, snack time, bed time, etc. (birth to 3) • Understand and use language – before, after, yesterday, today, tomorrow (3 & 4 year olds) • Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then…' (3 & 4 year olds) • Know some names of the days of the week (3 & 4 year olds)	• Understand that measures of distance can have different names including length, width, height • Understand and use language to compare the length/width of two objects • Understand and use language to compare the height of two objects Understand and use language of comparison when ordering three objects of different lengths/widths/heights • Understand the concept of the conservation of length/width/height Weight/mass • Understand the measurement of weight/mass (heavy/light) Understand and use language to compare the weight/mass of two objects • Understand the measurement of volume/capacity (empty/full/nearly) Understand and use language to compare two of the same container holding different amounts • Understand and use the language of comparison when ordering three of the same container holding different amounts • Understand that we need to pay for goods • Talk about things they want to spend their money on • Talk about different ways we can pay for things • Recognise that there are different coins • Recognise 1p coin • Use 1p coins to pay for objects • Talk about significant times of the day, e.g. home time, lunch time, snack time, bed time, etc. • Understand and use language – before, after, yesterday, today, tomorrow • Know the names of the days of the week • Say the names of the days of the week in order

Maths Progression at St. Andrew's Methodist
Key Stage 1 and Key Stage 2

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number and Place Value	• Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • Count in multiples of twos, fives and tens • Read and write numbers to 100 in numerals • Read and write numbers from 1 to 20 in numerals and words • *Begin to recognise the place value of numbers beyond 20 (tens and ones)* • Identify and represent numbers using objects and pictorial representations including the number line • Use the language of: equal to, more than, less than (fewer), most, least • Given a number, identify one more and one less • *Recognise and create repeating patterns with numbers, objects and shapes* • *Identify odd and even numbers linked to counting in twos from 0 and 1*	• Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward • Read and write numbers to at least 100 in numerals and in words • Recognise the place value of each digit in a two-digit number (tens, ones) • Identify, represent and estimate numbers using different representations, including the number line • *Partition numbers in different ways (e.g. 23 = 20 + 3 and 23 = 10 + 13)* • Compare and order numbers from 0 up to 100; use <, > and = signs • *Find 1 or 10 more or less than a given number* • *Round numbers to at least 100 to the nearest 10* • *Understand the connection between the 10 multiplication table and place value* • *Describe and extend simple sequences involving counting*	• Count from 0 in multiples of 4, 8, 50 and 100 • Count up and down in tenths • Read and write numbers up to 1000 in numerals and in words • *Read and write numbers with one decimal place* • Identify, represent and estimate numbers using different representations *(including the number line)* • Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • *Identify the value of each digit to one decimal place* • *Partition numbers in different ways (e.g. 146 = 100+ 40+6 and 146 = 130+16)* • Compare and order numbers up to 1000 • *Compare and order numbers with one decimal place* • Find *1,* 10 or 100 more or less than a given number • *Round numbers to at least 1000 to the nearest 10 or 100*	• Count in multiples of 6, 7, 9, 25 and 1000 • Count backwards through zero to include negative numbers • Count up and down in hundredths • *Read and write numbers to at least 10 000* • *Read and write numbers with up to two decimal places* • Recognise the place value of each digit in a four-digit number • *Identify the value of each digit to two decimal places* • *Partition numbers in different ways (e.g. 2.3 = 2+0.3 & 1+1.3)* • Identify, represent and estimate numbers using different representations *(including the number line)* • Order and compare numbers beyond 1000 • *Order and* compare numbers with the same number of decimal places up to two decimal places • Find *0.1, 1, 10, 100 or* 1000 more or less than a given number • Round any number to the nearest 10, 100 or 1000 • Round decimals (one decimal place) to the nearest whole number • Find the effect of dividing a one- or	• number up to 1 000 000 • *Count forwards and backwards in decimal steps* • 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 with up to 3 decimal places • *Identify the value of each digit to three decimal places* • *Identify represent and estimate numbers using the number line* • *Find 0.01, 0.1, 1, 10, 100, 100 and other powers of 10 more or less than a given number* • Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • Round decimals with two decimal places to the nearest whole number and to one decimal place • Multiply/divide whole numbers and decimals by 10, 100 and 1000 • Interpret negative numbers in context, count on and back with positive and negative whole	• *Count forwards or backwards in steps of integers, decimals, powers of 10* • Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • Identify the value of each digit to three decimal places • *Identify, represent and estimate numbers using the number line* • *Order and compare numbers including integers, decimals and negative numbers* • *Find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more/less than a given number* • Round any whole number to a required degree of accuracy • *Round decimals with three decimal places to the nearest whole number or one or two decimal places* • Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places

	• *Solve problems and practical problems involving all of the above*	*on or back in different steps* • Use place value and number facts to solve problems	• *Find the effect of multiplying a one- or two-digit number by 10 and 100, identify the value of the digits in the answer* • *Describe and extend number sequences involving counting on or back in different steps* • *Read Roman numerals from I to XII* • Solve number problems and practical problems involving these ideas	two-digit number by 10 and 100, identifying the value of the digits in the answer • *Describe and extend number sequences involving counting on or back in different steps, including sequences with multiplication and division steps* • Read Roman numerals to 100 and know that over time, the numeral system changed to include the concept of zero and place value • Solve number and practical problems that involve all of the above and with increasingly large positive numbers	numbers, including through zero • *Describe and extend number sequences including those with multiplication/division steps and where the step size is a decimal* • Read Roman numerals to 1000 (M); recognise years written as such • Solve number and practical problems that involve all of the above	• Use negative numbers in context, and calculate intervals across zero *Describe and extend number sequences including those with multiplication and division steps, inconsistent steps, alternating steps and those where the step size is a decimal* • Solve number and practical problems that involve all of the above
Number- Addition and Subtraction	• Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • Represent and use number bonds and related subtraction facts within 20 • Add and subtract one-digit and two-digit numbers to 20, including zero *(using concrete objects and pictorial representations)* • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems	• *involved (recall a known fact, calculate mentally, use a jotting)* • *Select a mental strategy appropriate for the numbers involved in the calculation* • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • *Understand subtraction as take away and difference (how many more, how many less/fewer)* • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • *Recall and use number bonds for*	• *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)* • *Select a mental strategy appropriate for the numbers involved in the calculation* • *Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context* • *Recall/use addition/subtraction facts for 100 (multiples of 5 and 10)* • *Derive and use addition and*	• *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)* • *Select a mental strategy appropriate for the numbers involved in the calculation* • *Recall and use addition and subtraction facts for 100* • *Recall and use +/- facts for multiples of 100 totalling 1000* • *Derive and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place)* • *Add and subtract mentally combinations of two and three digit numbers and decimals to one decimal place*	• *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)* • *Select a mental strategy appropriate for the numbers involved in the calculation* • *Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place)* • *Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places)* • Add and subtract numbers mentally with increasingly large numbers *and decimals to two decimal places*	• *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)* • *Select a mental strategy appropriate for the numbers in the calculation* • *Recall and use addition and subtraction facts for 1 (with decimals to two decimal places)* • Perform mental calculations including with mixed operations and large numbers *and decimals* • *Add and subtract whole numbers and decimals using formal written methods (columnar*

		multiples of 5 totalling 60 (to support telling time to nearest 5 minutes) ● 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 ● Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems ● Solve problems with addition and subtraction *including with missing numbers*	*subtraction facts for 100* ● *Derive and use addition and subtraction facts for multiples of 100 totalling 1000* ● 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 with up to three digits, using formal written methods of columnar addition and subtraction ● Estimate the answer to a calculation and use inverse operations to check answers ● Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	● Add and subtract numbers with up to 4 digits *and decimals with one decimal place* using the formal written methods of columnar addition and subtraction where appropriate ● Estimate; use inverse operations to check answers to a calculation ● Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why ● *Solve addition and subtraction problems involving missing numbers*	● Add and subtract whole numbers with more than 4 digits *and decimals with two decimal places,* including using formal written methods (columnar addition and subtraction) ● Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy ● Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why ● *Solve addition and subtraction problems involving missing numbers*	*addition and subtraction)* ● Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy ● Use knowledge of the order of operations to carry out calculations Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why ● Solve problems involving all four operations, *including those with missing numbers*
Number Multiplication and Division	● *Recall and use doubles of all numbers to 10 and corresponding halves* ● 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	● *Understand multiplication as repeated addition* ● *Understand division as sharing and grouping and that a division calculation can have a remainder* ● Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	● *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)* ● *Understand that division is the inverse of multiplication and vice versa* ● *Understand how multiplication and division statements can be*	● *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)* ● Recognise and use factor pairs and commutativity in mental calculations ● Recall multiplication and division facts for multiplication tables up to 12 × 12 ● *Use partitioning to double or halve any number, including*	● *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)* ● 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	● *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)* ● Identify common factors, common multiples and prime numbers ● *Use partitioning to double or halve any number* ● Perform mental calculations,

		• Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • *Derive and use doubles of simple two-digit numbers (numbers in which the ones total less than 10)* • *Derive and use halves of simple two-digit even numbers (numbers in which the tens are even)* • Calculate mathematical statements for multiplication *using repeated addition)* and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • Solve problems involving multiplication and division *(including those with remainders)*, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	*represented using arrays* • *Understand division as sharing and grouping and use each appropriately* • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • *Derive and use doubles of all numbers to 100 and corresponding halves* • *Derive and use doubles of all multiples of 50 to 500* • 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 • *Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy* • Solve problems, including missing number problems, involving multiplication and division *(and interpreting remainders),* including positive	*decimals to one decimal place* • 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 two-digit and three-digit numbers by a one-digit number using formal written layout • *Divide numbers up to 3 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context* • *Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy* • Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, *division (including interpreting remainders),* integer scaling problems and harder correspondence problems such as n objects are connected to m objects	factors and composite (non-prime) numbers • Establish whether a number up to 100 is prime and recall prime numbers up to 19 • Recognise and use square (^{2}) and cube (^{3}) numbers, and notation • *Use partitioning to double or halve any number, including decimals to two decimal places* • Multiply and divide numbers mentally drawing upon known facts • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • 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 • 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 • *Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy* • Solve problems involving addition, subtraction,	including with mixed operations and large numbers • Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • Multiply one-digit numbers with up to two decimal places by whole numbers • Divide numbers up to 4 digits by a two-digit whole number using the formal written methods of short or long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • Use written division methods in cases where the answer has up to two decimal places • Use estimation *and inverse* to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy Use knowledge of the order of operations to carry out calculations • Solve problems involving all four operations, *including those*

			integer scaling problems and correspondence problems in which n objects are connected to m objects		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	*with missing numbers*
Number Fractions	● *Understand that a fraction can describe part of a whole* ● *Understand that a unit fraction represents one equal part of a whole* ● Recognise, find and name a half as one of two equal parts of an object shape or quantity *(including measure)* ● Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity *(including measure)*	● *Understand and use the terms numerator and denominator* ● *Understand that a fraction can describe part of a set* ● *Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be* ● Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity ● Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ ● *Count on and back in steps of* $\frac{1}{2}$ *and* $\frac{1}{4}$	● *Show practically or pictorially that a fraction is one whole number divided by another (e.g.* $\frac{3}{4}$ *can be interpreted as 3 ÷ 4)* ● *Understand that finding a fraction of an amount relates to division* ● Recognise that tenths arise from dividing objects into 10 equal parts and in dividing one-digit numbers or quantities by 10 ● Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators ● Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators ● Recognise and show, using diagrams, equivalent fractions with	● *Understand that a fraction is one whole number divided by another (e.g.* $\frac{3}{4}$ *can be interpreted as 3 ÷ 4)* ● *Recognise, find and write fractions of a discrete set of objects including those with a range of numerators and denominators* ● Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten ● *Count on and back in steps of unit fractions* ● *Compare and order unit fractions and fractions with the same denominators (including on a number line)* ● Recognise and show, using diagrams, families of common equivalent fractions ● Recognise and write decimal equivalents of any number of tenths or hundredths ● Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ ● Add and subtract fractions with the same denominator *(using diagrams)*	● Recognise mixed numbers and improper fractions and convert from one form to the other ● Read and write decimal numbers as fractions (e.g. 0.71 = $\frac{71}{100}$) ● *Count on and back in mixed number steps such as* $1\frac{1}{2}$ ● Compare and order fractions whose denominators are all multiples of the same number *(including on a number line)* ● Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths ● Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents ● Add and subtract fractions with denominators that are the same and that are multiples of the same number *(using diagrams)*	● Compare and order fractions, including fractions > 1 *(including on a number line)* ● Use common factors to simplify fractions; use common multiples to express fractions in the same denomination ● Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts ● Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375 and $\frac{3}{8}$) ● 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

			small denominators • Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$] • Compare and order unit fractions, and fractions with the same denominators *(including on a number line)* • *Count on and back in steps of* $\frac{1}{2}$, $\frac{1}{4}$ *and* $\frac{1}{3}$	• 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 simple measure and money problems involving fractions and decimals to two decimal places	• Write statements > 1 as a mixed number (e.g. $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$) • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • 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, and as a decimal • *Solve problems involving fractions and decimals to three places* • 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 fractions with a denominator of a multiple of 10 or 25	simplest form (e.g. $\frac{1}{4}\times\frac{1}{2}=\frac{1}{8}$) • Divide proper fractions by whole numbers (e.g. $\frac{1}{3}\div 2=\frac{1}{6}$) • *Find simple percentages of amounts* • *Solve problems involving fractions* Solve problems which require answers to be rounded to specified degrees of accuracy • Solve problems involving the calculation of percentages (e.g. of measures and such as 15% of 260) and the use of percentages for comparison
Measurement	• Measure and begin to record: • - lengths and heights, *using non-standard and then manageable standard units (m/cm)* - mass/weight, *using non-standard and then manageable standard units (kg/g)* • - capacity and volume *using non-standard and then manageable*	• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity and volume (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels • Compare and order lengths, mass,	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • *Continue to estimate and measure temperature to the nearest degree (°C) using thermometers* • *Understand perimeter is a measure of distance around the boundary of a shape*	• Estimate, compare and calculate different measures, including money in pounds and pence • *Order temperatures including those below 0°C* • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • *Know area is a measure of surface within a given boundary* • Find the area of rectilinear shapes by counting squares	• *Use, read and write standard units of length and mass* • Estimate *(and calculate)* volume ((e.g., using 1 cm^3 blocks to build cuboids (including cubes)) and capacity (e.g. using water) • *Understand the difference between liquid volume and solid volume* • *Continue to order temperatures including those below 0°C* • Convert between different units of metric measure	• Use, read and write standard units of length, mass, volume and time using decimal notation to three decimal places • Convert between standard units of length, mass, volume and time using decimal notation to three decimal places • Convert between miles and kilometres • Recognise that shapes with the same areas can have different

	standard units (litres/ml) time (hours/minutes/seconds) ● *within children's range of counting competence* ● Compare, describe and solve practical problems for: ● - 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, half full, quarter) time (for example, quicker, slower, earlier, later) ● Recognise and use language relating to dates, including days of the week, weeks, months and years ● Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening ● Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	volume/capacity and record the results using >, < and = ● Recognise 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 ● Compare and sequence intervals of time ● 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 ● Know the number of minutes in an hour and the number of hours in a day ● Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change *and measures (including time)*	● Measure the perimeter of simple 2-D shapes ● Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks ● Estimate/read time with increasing accuracy to the nearest minute ● Record/compare time in terms of seconds, minutes, hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon, 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] ● *Continue to recognise and use the symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds/pence* ● *Recognise that ten 10p coins equal £1 and that each coin is $\frac{1}{10}$ of £1* Add and subtract amounts of money to give change, using both £ and p in practical contexts	● Convert between different units of measure [e.g. kilometre to metre; hour to minute] ● Read, write and convert time between analogue and digital 12- and 24-hour clocks ● *Write amounts of money using decimal notation* ● *Recognise that one hundred 1p coins equal £1 and that each coin is $\frac{1}{100}$ of £1* ● Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days *and problems involving money and measures*	● Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints ● Measure/calculate the perimeter of composite rectilinear shapes ● Calculate and compare the area of rectangle, use standard units square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes ● *Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks* ● Solve problems involving converting between units of time ● Use all four operations to solve problems involving measure using decimal notation, including scaling	perimeters and vice versa ● Calculate the area of parallelograms and triangles ● Recognise when it is possible to use formulae for area and volume of shapes ● 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) ● *Calculate differences in temperature, including those that involved a positive and negative temperature* ● Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate

	• Recognise and know the value of different denominations of coins and notes		• *Solve problems involving money and measures and simple problems involving passage of time*			
Geometry- Properties of Shape	• Recognise and name common 2-D shapes, including rectangles (including squares), circles and triangles • Recognise and name common 3-D shapes, including 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]	• Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them • Recognise angles as a property of shape or a description of a turn • Identify right angles, recognise that two right angles make a half-turn, 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 horizontal and vertical lines and pairs of perpendicular and parallel lines	• Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • Identify lines of symmetry in 2-D shapes presented in different orientations • Complete a simple symmetric figure with respect to a specific line of symmetry *Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines* • Identify acute and obtuse angles and compare and order angles up to two right angles by size	• Distinguish between regular and irregular polygons based on reasoning about equal sides and angles • Use the properties of rectangles to deduce related facts and find missing lengths and angles • Identify 3-D shapes from 2-D representations • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • Draw given angles, and measure them in degrees (°) • Identify:angles at a point and one whole turn (total 360°) • - angles at a point on a straight line and half a turn (total 180°) - other multiples of 90°	• Compare/classify geometric shapes based on the properties and sizes • Draw 2-D shapes using given dimensions and angles • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • Recognise, describe and build simple 3-D shapes, including making nets Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles • Find unknown angles in any triangles, quadrilaterals, regular polygons
Geometry- Position and Direction	• Describe movement, including whole, half, quarter and three-quarter turns • *Recognise and create repeating patterns with objects and shapes*	• Order/arrange combinations of mathematical objects in patterns/sequences • Use mathematical vocabulary to describe position, direction and movement, including	• *Describe positions on a square grid labelled with letters and numbers*	• Describe positions on a 2-D grid as coordinates in the first quadrant • Plot specified points and draw sides to complete a given polygon • Describe movements between positions as translations of a given	• *Describe positions on the first quadrant of a coordinate grid* • *Plot specified points and complete shapes* • Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate	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

	• Describe position and direction	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)		unit to the left/right and up/down	language, and know that the shape has not changed	
Statistics	•	• Compare and sort *objects, numbers and* common 2-D and 3-D shapes and everyday objects • Interpret and construct simple pictograms, tally charts, block diagrams and simple tables • 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	• *Use sorting diagrams to compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects* • Interpret and present data using bar charts, pictograms and tables • 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	• *Use a variety of sorting diagrams to* compare and classify *numbers and* geometric shapes based on their properties and sizes • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts, time graphs • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	• *Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes)* • Complete, read and interpret information in tables and timetables • Solve comparison, sum and difference problems using information presented in *all types of graph including* a line graph • *Calculate and interpret the mode, median and range*	• *Continue to complete and interpret information in a variety of sorting diagrams (including sorting properties of numbers and shapes)* • Interpret and construct pie charts and line graphs and use these to solve problems *Solve comparison, sum and difference problems using information presented in all types of graph* • Calculate and interpret the mean as an average
Ratio and Proportion						• Solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication/division facts Solve problems involving unequal sharing and grouping using knowledge of

						fractions and multiples ● Solve problems involving similar shapes where the scale factor is known or can be found
Algebra						● Use simple formulae ● Generate and describe linear number sequences ● Express missing number problems algebraically Find pairs of numbers that satisfy an equation with two unknowns ● Enumerate possibilities of combinations of two variables