



Meltham Moor Primary Mathematics Progression

<p>Nursery</p>	<p>Baseline: Counting, sorting, colours and basic shapes</p> <ul style="list-style-type: none"> • Be able to subitise up to 3. • Count in sequence to 10 – claps, hops, jumps etc. • Sing counting songs and rhymes and use children or their fingers to support their understanding. • Count objects, pointing out the last number. • Explore and name basic 2D shapes. • Use their fingers to show numbers to 5. (Finger ‘Shoe me’) <p>Know about patterns – spots and stripes</p>	<ul style="list-style-type: none"> • Be able to count objects, pointing out the last number. • Play number games that involve collecting a specific number of items. • Show finger numbers to 5. • Be able to link numerals to amounts. • Know about different patterns – patchwork (Elmer) <p>Be able to say whether a containers is full/half/full/ empty.</p>	<ul style="list-style-type: none"> • Explore numerals and number tracks. • Start to be able to solve real world mathematical problems. (e.g. sharing fruit at snack time) • Be able to make simple visual comparisons (more/less than) • Explore and name 2D and 3D shapes. Start to talk about how many faces, sides and corners they have. • Continue to look for patterns around us. <p>Be able to compare two items by length and weight.</p>	<ul style="list-style-type: none"> • Explore prepositions and follow instructions involving simple prepositions (Where’s Bear? Book) • Use positional language – be able to give and follow directions using a Bebot. • Know the names and properties of some 2D and 3D shapes. • Find and talk about shapes in the environment. • Sort shapes into sets. • Be able to recognise, match and order 1-5. <p>Be able to sequence events using simple picture cards e.g. morning routine.</p>	<ul style="list-style-type: none"> • Be able to recognise, match and order 1-10 • Be able to subitise 3 plus amounts. • Hold up finger numbers to 10. • Be able to match numerals to amounts. • Know the names and properties of some 2D and 3D shapes • Be able to make a simple 2 colour repeating pattern. <p>Be able to comparing 2 or more items by length and weight.</p>	<ul style="list-style-type: none"> • Be able to recognise, match and order 1-10. • Name and know the properties of 2D and 3D shapes • Be able to writing some numerals 1-5. • Be able to subitise 3 plus amounts. • Show finger numbers to 10. Know that they can put fingers up on each hand as long as it represents the same amount. • Be able to match numerals to amounts. • Name and know the properties of 2D and 3D shapes. • Create their own pattern using sounds, people, etc. • Be able to sort items – comparing size and capacity. (Goldilocks)
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<p>Reception</p>	<p><u>Getting to know you</u></p> <p>Time to get play and get to know the children's mathematical ability</p> <p><u>Just Like Me!</u></p> <p>Number -Matching and sorting Comparing amounts Measure, Shape and Spatial Thinking Comparing size, mass and capacity Exploring patterns</p>	<p><u>It's Me 1, 2, 3!</u></p> <p>Number -Representing 1, 2, 3 Comparing 1, 2, 3 Composition of 1, 2, 3</p> <p><u>Light and Dark</u></p> <p>Number -Representing numbers to 5 One more/one less Measure, Shape and Spatial Thinking Shapes with 4 sides -Time</p>	<p><u>Alive in 5!</u></p> <p>Number Introducing zero Comparing numbers to 5 Composition of 4 and 5 Measure, Shape and Spatial Thinking Compare Mass Compare Capacity</p> <p><u>Growing 6, 7, 8</u> Number -6, 7 and 8 Making pairs Combining two groups Measure, Shape and Spatial Thinking Length and height Time</p> <p><u>Building 9 and 10</u> Number -9 and 10 Comparing numbers to 10 Bonds to 10 Measure, Shape and Spatial Thinking 3D shape Patterns</p>	<p><u>Building 9 and 10</u> Number -9 and 10 Comparing numbers to 10 Bonds to 10 Measure, Shape and Spatial Thinking 3D shape Patterns</p>	<p><u>On the Move</u> Number - Deepening understanding of patterns and relationships Measure, Shape and Spatial Thinking -Mapping (Spatial Reasoning)</p> <p><u>To 20 and Beyond</u> Number Building numbers beyond 10 Counting patterns beyond 10 Measure, Shape and Spatial Thinking Match, Rotate, Manipulate (Spatial Reasoning)</p> <p><u>First, Then, Now</u> Number Adding more and taking away Measure, Shape and Spatial Thinking Compose and Decompose (Spatial Reasoning)</p>	<p><u>First, Then, Now</u> Number Adding more and taking away Measure, Shape and Spatial Thinking Compose and Decompose (Spatial Reasoning)</p> <p><u>Find My Pattern</u> Number - Doubling, sharing and grouping Even and Odd Measure, Shape and Spatial Thinking Visualise and build (Spatial Reasoning)</p>
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Aspect	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value: Counting	<ul style="list-style-type: none"> *Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. *Count numbers to 100 in numerals; count in multiples of twos, fives and tens from different multiples to develop their recognition of patterns in the number system, e.g. odd and even numbers. *Recognise and count in ordinal numbers. 	<ul style="list-style-type: none"> *Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward. 	<ul style="list-style-type: none"> *Count from 0 in multiples of 4, 8, 50 and 100. *Find 10 or 100 more or less than a given number. *Continue to count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward. 	<ul style="list-style-type: none"> *Count in multiples of 6, 7, 9, 25 and 1000. *Count backwards through zero to include negative numbers. 	<ul style="list-style-type: none"> *Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. *Count forwards and backwards with positive and negative whole numbers, including through zero. *Counting forwards and backwards in decimals. 	<ul style="list-style-type: none"> *Count in increasingly larger numbers (for example, 250, 500, 1,000). *Count in decimal numbers.
Place Value: Represent	<ul style="list-style-type: none"> *Identify and represent numbers using objects, pictorial representations including the number line. *Read and write numbers to 100 in numerals. *Read and write numbers 1 to 20 in words. 	<ul style="list-style-type: none"> *Read and write numbers to at least 100 in numerals and words. *Identify, represent and estimate numbers using different representations, including the number line. 	<ul style="list-style-type: none"> *Identify, represent and estimate numbers using different representations. *Read and write numbers up to 1,000 in numerals and words. 	<ul style="list-style-type: none"> *Identify, represent and estimate numbers using different representations. *Read Roman numerals I to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. 	<ul style="list-style-type: none"> *Read and write numbers up to at least 1,000,000 and determine the value of each digit. *Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. 	<ul style="list-style-type: none"> *Read and write numbers up to 10,000,000 and determine the value of each digit.
Place Value: Compare	<ul style="list-style-type: none"> *Given a number, identify one more and one less. *Recognise place value in numbers beyond 20 and up to 100 by comparing numbers. *Use <, > and = to compare numbers. *Use the language of: equal to, more than, less than (fewer). 	<ul style="list-style-type: none"> *Recognise the place value of each digit in a two-digit number (tens, ones). *Compare and order numbers from 0 up to 100; use <, > and = signs. 	<ul style="list-style-type: none"> *Recognise the place value of each digit in a three-digit numbers (hundreds, tens, ones). *Compare and order numbers up to 1,000. 	<ul style="list-style-type: none"> *Find 1000 more or less than a given number. *Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). *Order and compare numbers beyond 1000. 	<ul style="list-style-type: none"> *Order and compare numbers to at least 1,000,000 and determine the value of each digit. 	<ul style="list-style-type: none"> *Order and compare numbers up to 10,000,000 and determine the value of each digit.
Place Value: Rounding			<ul style="list-style-type: none"> *Recognise the position of numbers in relation to 	<ul style="list-style-type: none"> *Round any number to the nearest 10, 100 and 1000. 	<ul style="list-style-type: none"> *Round any number up to 1,000,000 to the nearest 10, 	<ul style="list-style-type: none"> *Round any whole number to a required degree of accuracy.



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			<p>multiples of 10 using a number line.</p>		<p>100, 1,000, 10,000 and 100,000.</p>	
<p>Place Value: Problem Solving</p>	<p>*Solve simple problems involving counting, representing and comparing. E.g. Teddy says he has rolled a 2 on the dice. Explain his mistake.</p>	<p>*Use place value and number facts to solve problems.</p>	<p>*Solve number problems and practical problems involving number and place value.</p>	<p>*Solve number and practical problems that involve all of the above and with increasingly large positive numbers.</p>	<p>*Solve number problems and practical problems that involve all of the above. *Interpret negative numbers in context.</p>	<p>*Use negative numbers in context, and calculate intervals across zero. *Solve number and practical problems that involve all of the above.</p>
<p>Addition and Subtraction: Estimate</p>			<p>*Estimate the answer to a calculation and use inverse operations to check answers.</p>	<p>*Estimate and use inverse operations to check answers to a calculation.</p>	<p>*Use rounding and estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</p>	<p>*Independently round and estimate calculations to determine their level of accuracy.</p>
<p>Addition and Subtraction: Recall, Represent and Use</p>	<p>*Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equal (=) signs. *Represent and use number bonds and related subtraction facts within 20.</p>	<p>*Recall and use addition and subtraction facts to 20, and derive and use related facts to 100. *Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. *Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p>*Add and subtract numbers mentally, including: >a three-digit number and ones >a three-digit number and tens >a three-digit number and hundreds</p>			
<p>Addition and Subtraction: Calculations</p>	<p>*Add and subtract one-digit and two-digit numbers to 20, including 0. *Identify the parts and whole in calculations.</p>	<p>*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</p>	<p>*Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.</p>	<p>*Add and subtract numbers with up to 4 digits using formal written methods of columnar addition and subtraction where appropriate. *Continue to practise both mental methods with</p>	<p>*Add and subtract whole numbers with more than 4 digits, including formal written methods (columnar addition and subtraction). *Add and subtract numbers mentally with increasingly large numbers.</p>	<p>*Perform mental calculations, including mixed operations and large numbers. *Use their knowledge of the order of operations to carry out calculations involving the four operations.</p>



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		<p>>adding three one-digit numbers</p> <p>*Pupils will begin to record additions and subtractions in columns.</p>		<p>increasingly large numbers to aid fluency.</p>		
Addition and Subtraction: Problems	<p>*Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$</p>	<p>*Solve problems with addition and subtraction: >using concrete objects and pictorial representations, including those involving numbers, quantities and measures. >apply their increasing knowledge of mental and written methods.</p>	<p>*Solve problems including missing number problems, using number facts, place value, and more complex addition and subtraction.</p>	<p>*Solve addition and subtraction problems in contexts, deciding which operations and methods to use and why.</p>	<p>*Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p>	<p>*Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p>
Multiplication and Division: Recall	<p>*Begin to recall doubling and sharing small quantities.</p> <p>*Count in multiples of twos, fives and tens.</p>	<p>*Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.</p>	<p>*Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.</p> <p>*Use doubling to recall and connect the 2, 4 and 8 multiplication tables.</p>	<p>*Recall multiplication and division facts for multiplication tables up to 12×12.</p>	<p>*Continue to recall multiplication and division facts for multiplication tables up to 12×12.</p> <p>*Recall factors of a given number and recall prime numbers to 19.</p>	<p>*Use their knowledge of the multiplication and division tables up to 12×12 to recall related facts, for example, 0.9×4, 90×4, 900×4.</p> <p>*Recall factors of a given number and recall primary numbers to 30.</p>
Multiplication and Division: Represent and Use	<p>*Recognise equal and unequal groups.</p> <p>*Use concrete objects and pictorial representations, such as arrays and number patterns, to make connections.</p>	<p>*Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.</p>	<p>*Represent multiplication and division facts for 3, 4 and 8 in concrete and pictorial representations.</p>	<p>*Use concrete apparatus and pictorial representations to represent multiplication and division facts for multiplication tables up to 12×12.</p> <p>*Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.</p> <p>*Recognise and use factor pairs and commutativity in mental calculations.</p>	<p>*Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</p> <p>*Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.</p> <p>*Establish whether a number up to 100 is prime and recall primer numbers up to 19.</p> <p>*Recognise and use square numbers and cube numbers, and</p>	<p>*Identify common factors, multiples and prime numbers.</p> <p>*Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</p>



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					the notation for squared (²) and cubed (³).	
Multiplication and Division: Calculations	*Add (+) multiple equal groups to understand multiplication.	*Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), 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 one-digit number using formal written layout. *Become fluent in formal written methods of short multiplication and division with exact answers.	*Multiply and divide numbers mentally drawing upon known facts. *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. *Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000.	*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 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. *Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. *Perform mental calculations, including with mixed operations and large numbers.
Multiplication and Division: Solve Problems	*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 context.	*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 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 multiplication and division, including scaling by simple fractions and problems involving simple rates.	See Combined Operations.



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Multiplication and Division: Combined Operations					*Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	*Solve problems involving addition, subtraction, multiplication and division. *Use their knowledge of the order of operations to carry out calculations involving the four operations.
Fractions: Recognise and Write	*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 $\frac{1}{2}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.	*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.		*Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. *Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (for example, $\frac{7}{5} + \frac{1}{5} = \frac{8}{5} = 1\frac{3}{5}$).	
Fractions: Counting		*Count in fractions up to 10, start from any number and using $\frac{1}{2}$ and $\frac{2}{4}$ equivalence on a number line ($1\frac{1}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$, 2).	*Count up and down in tenths, using concrete and pictorial representations, and the number line. *Continue to count in halves and quarters.	*Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	*Count forward and backward in proper fractions and mixed numbers.	*Count up and down in improper fractions and mixed numbers.
Fractions: Compare		*Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	*Recognise and show, using diagrams, equivalent fractions with small denominators. *Compare and order unit fractions, and fractions with the same denominator. *Recognise equivalent fractions using concrete and	*Recognise and show, using diagrams, families of common equivalent fractions.	*Identify, name and write equivalent fractions. *Compare and order fractions whose denominators are all multiples of the same number.	*Use common factors to simplify fractions. *Use common multiples to express fractions in the same denomination. *Compare and order fractions, including fractions > 1 .



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			pictorial representations and the number line.			
Fractions: Calculations		*Write simple fractions for example, $\frac{1}{2}$ of 6 = 3, $\frac{1}{4}$ of 8 = 2, $\frac{2}{4}$ of 8 = 4 and $\frac{3}{4}$ of 8 = 6.	*Add and subtract fractions with the same denominator within one whole (for example, $\frac{1}{8} + \frac{3}{8} = \frac{4}{8}$). *Calculate fractions of a set of objects using concrete and pictorial representations, and the number line.	*Add and subtract fractions with the same denominator.	*Add and subtract fractions with the same denominator and denominators that are multiples of the same number. *Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	*Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. *Multiply simple pairs of proper fractions, writing the answer in its simplest form (for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$). *Divide proper fractions by whole numbers (for example, $\frac{1}{2} \div 2 = \frac{1}{4}$).
Fractions: Solve Problems		*Solve simple problems, for example, Teddy has $\frac{1}{4}$ of £8. Billy have $\frac{1}{2}$ of £10. Who has the more money?	*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 whole number.	*Solve problems that involve all of the above. See Fractions, Decimals and Percentages.	*Solve problems that involve all of the above. See Fractions, Decimals and Percentages.
Decimals: Recognise and Write				*Recognise and write decimal equivalents of any number of tenths or hundredths. *Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.	*Read and write decimal numbers as fractions (for example, $0.71 = \frac{71}{100}$). *Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	*Identify the value of each digit in numbers given to three decimal places.
Decimals: Compare and Rounding				*Round decimals with one decimal place to the nearest whole number. *Compare numbers with the same number of decimal places up to two decimal places.	*Round decimals with two decimal places to the nearest whole number and to one decimal place. *Read, write, order and compare numbers with up to three decimal places.	*Develop their skills of rounding and estimating as a means of predicting and checking the order of magnitude of answers to decimal calculations.
Decimals: Calculations				*Find the effect of dividing a one-ot-two-digit number by 10	*Add and subtract decimals, including a ix of whole numbers	*Multiply and divide numbers by 10, 100 and 1,000 giving



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				and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.	and decimals, decimals with different numbers of decimal places, and complements of 1 (for example, $0.83 + 0.17 = 1$).	answers up to three decimal places. *Multiply one-digit numbers with up to two decimal places by whole numbers. *Use written division methods in cases where the answer has up to two decimal places.
Decimals: Problems				*Solve problems involving the above content for decimals. See Fractions, Decimals and Percentages.	*Solve problems involving numbers up to three decimal places. See Fractions, Decimals and Percentages.	*Solve problems which require answers to be rounded to specified degrees of accuracy. See Fractions, Decimals and Percentages.
Fractions, Decimals and Percentages				*Solve simple measure and money problems involving fractions and decimals to two decimal places.	*Recognise the per cent symbol (%) and understand per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. *Solve problems which require knowing percentage and decimal equivalents or $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.	*Associate a fraction with division and calculate decimal fraction equivalents (for example, 0.375) for a simple fraction (for example, $\frac{3}{8}$). *Recall and use equivalences between simple fractions, decimals and percentages, including different contexts.
Ratio and Proportion		*Use simple ratios (2, 5, 10) when interpreting data, for example, in pictograms.	*Use simple ratios (2, 3, 4, 5, 8 and 10) when interpreting data, for example, in pictograms.	*Recognise numbers and proportion through decimals and fractions.	*Recognise that percentages, decimals and fractions are different ways of expressing proportions. *Use multiplication and division to support the introduction of ratio in year 6.	*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



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						<p>use of percentages for comparison.</p> <p>*Solve problems involving similar shapes where the scale factor is known or can be found.</p> <p>*Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</p>
Algebra	<p>*Solve missing number problems, such as $7 = \square - 9$.</p>	<p>*Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p>*Solve problems, involving missing number problems.</p>	<p>*Solve missing number problems.</p> <p>*Perimeter is expressed algebraically as $2(a + b)$ where a and b are the dimensions in the same unit.</p>	<p>*Solve missing number problems.</p> <p>*Perimeter and area expressed algebraically.</p>	<p>*Use simple formulae</p> <p>*Generate and describe linear number sequences.</p> <p>*Express missing number problems algebraically.</p> <p>*Find pairs of numbers that satisfy an equation with two unknowns.</p> <p>*Enumerate possibilities of combinations of two variables.</p>
Measurement: Using Measures	<p>*Compare, describe and solve practical problems for:</p> <ul style="list-style-type: none"> >lengths and height (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.) <p>*Measure and begin to record the following:</p>	<p>*Choose and use appropriate standard units to estimate length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}$C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.</p> <p>*Compare and order lengths, mass, volume/capacity and record the results using $<$, $>$ and $=$.</p> <p>*Read scales in divisions of ones, twos, fives and tens.</p>	<p>*Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).</p>	<p>*Convert between different units of measures (for example, kilometre to metre; hour to minute).</p> <p>*Estimate, compare and calculate different measures.</p>	<p>*Convert between different units of metric measures (for example, kilometre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).</p> <p>*Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.</p> <p>*Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation, including scaling.</p>	<p>*Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.</p> <p>*use, read, write and convert between standard units, converting measurements of length, mass and volume from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places.</p> <p>*Convert between miles and kilometres.</p>



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	<ul style="list-style-type: none"> >lengths and heights >mass/weight >capacity and volume 					
Measurement: Money	<ul style="list-style-type: none"> *Recognise and know the value of different denominations of coins and notes. *Count in multiples of 1ps, 2ps, 5s and 10ps. *Compare amounts of money (coins). *Solve simple one-step problems involving amounts of money (coins). 	<ul style="list-style-type: none"> *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. *Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. 	<ul style="list-style-type: none"> *Add and subtract amounts of money to give change, using both £ and p in practical contexts. 	<ul style="list-style-type: none"> Estimate, compare and calculate money in pounds and pence. 	<ul style="list-style-type: none"> *Use all four operations to solve problems involving money. 	
Measurement: Time	<ul style="list-style-type: none"> *Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.) *Recognise and use language relating to dates, including days of the week, weeks, months and years. *Tell the time to the hour (o'clock) and half past the hour and draw the hands on a clock face to show these times. *Compare, describe and solve practical problems for: <ul style="list-style-type: none"> >time (for example, quicker, slower, earlier, later.) 	<ul style="list-style-type: none"> *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. 	<ul style="list-style-type: none"> *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 and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m/p.m, morning, afternoon, noon and midnight. *Know the number of seconds in a minute and the number of days in each month, year and leap year. *Compare durations of events (for example to calculate the time taken by particular events or tasks). 	<ul style="list-style-type: none"> *Read, write and convert time between analogue and digital 12- and 24-hour clocks. *Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. 	<ul style="list-style-type: none"> *Solve problems involving converting between units of time. 	<ul style="list-style-type: none"> *Use, read, write and convert between standar units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa.



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	Measure and begin to record the following: >time (hours, minutes, seconds.)					
Measurement: Perimeter			*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.
Measurement: Area				*Find the area of rectilinear shapes by counting squares.	*Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm ²) and square metres (m ²) and estimate the area of irregular shapes.	*Calculate the area of parallelograms and triangles. *Recognise that shapes with the same areas can have different perimeters and vice versa. *Recognise when it is possible to use formulae for area for volume of shapes.
Measurement: Volume					*Estimate volume (for example, using 1 cm ³ blocks to build cuboids (including cubes)) and capacity (for example, using water).	*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 (for example, mm ³ and km ³). *Recognise when it is possible to use formulae for area and volume of shapes.
Geometry: 2-D Shapes	*Recognise and name common 2-D shapes (for example, rectangles (including squares), circles and triangle. *Recognise related everyday objects and know that rectangles, triangles	*Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. *Identify 2-D shapes on the surface of 3-D shapes.	*Draw 2-D shapes.	*Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.	*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.	*Draw 2-D shapes using given dimensions and angles. *Compare and classify geometric shapes based on their properties and sizes. *Illustrate and name parts of circles, including radius, diameter and circumference



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	etc. are not always similar to each other.	*Compare and sort 2-D shapes and everyday objects. *Pupils use rulers to draw lines to make shapes.				and know that the diameter is twice the radius.
Geometry: 3-D Shapes	*Recognise and name common 3-D shapes (for example, cuboids (including cubes), pyramids and spheres.) *Recognise related everyday objects and know that cuboids, pyramids etc. are not always similar to each other.	*Recognise and name common 3-D shapes (for example, cuboids (including cubes), pyramids and spheres). *Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. *Compare and sort 3-D shapes and everyday objects.	*Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.		*Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.	*Recognise, describe and build 3-D shapes, including making nets.
Geometry: Angles			*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 acute and obtuse angles and compare and order angles up to two right angles by size.	*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 ½ a turn (total 180°). >other multiples of 90°.	*Find unknown angles in any triangles, quadrilaterals, and regular polygons. *Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
Geometry: Lines			*Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	*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.	*Draw accurate lines with a ruler to the nearest millimetre. *Use conventional markings for parallel lines and right angles.	*Use conventional markings for parallel lines, right-angles, perpendicular lines and line lengths.
Geometry: Position and Direction	*Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	*Order and arrange combinations of mathematical objects in patterns and sequences.		*Describe positions on a 2-D grid as coordinates in the first quadrant. *Describe movements between positions as translations of a	*Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and	*Describe positions on the full coordinate grid (all four quadrants). *Draw and translate simple shapes on the coordinate



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		including those in different orientation. *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, three-quarter turns (clockwise and anti-clockwise).		given unit to the left/right and up/down. *Plot specified points and draw sides to complete a given polygon.	know that the shape has not changed.	plane, and reflect them in the axes.
Statistics: Present and Interpret		*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.
Statistics: 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.	*Solve one-step and two-step problems (for example, '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. *Use angles, fractions and percentages to support their interpretation of pie charts.

National Curriculum (Statutory Guidance)

Objectives additional to Statutory National Curriculum to encourage breadth/mastery of skills within the subject