

Dothill Progression Mapping



Mathematics

Respect Happiness Responsibility Creativity HONESTY Enthusiasm Confidence Kindness Cooperation fairness

NB: Text in red font is taken from the RTP criteria

	EYFS	Year One	Year Two																																																						
<p>Declarative</p> <p>I know that...</p> <p>(facts)</p>	<p>Number & Place Value</p> <ul style="list-style-type: none"> ✓ I know that numbers to 10 can be partitioned. ✓ I know that larger numbers are further along a numberline (for instance, when playing games with a numbered track) 	<p>Number & Place Value</p> <ul style="list-style-type: none"> ✓ I know that 10 ones are equivalent to 1 ten. ✓ I know that multiples of 10 are made up from a number of tens, e.g. 50 is 5 tens. ✓ I know where numbers 1 to 9 are approximately located on an unlabelled 0-10 numberline 	<p>Number & Place Value</p> <ul style="list-style-type: none"> ✓ I know, recognise and understand the place value in two-digit numbers. 																																																						
<p>Procedural</p> <p>I know how to...</p> <p>(methods)</p> <p>In addition to Dothill Calculation Policy</p>	<p>Number & Place Value</p> <ul style="list-style-type: none"> ✓ Compose numbers within 5 ✓ Verbally count beyond 20, recognising the pattern of the counting system; ✓ Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; ✓ Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. 	<p>Number & Place Value</p> <ul style="list-style-type: none"> ✓ Count within 100, forwards and backwards, starting with any number. ✓ Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$ ✓ Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number ✓ Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens 	<p>Number & Place Value</p> <ul style="list-style-type: none"> ✓ Recognise the place value of each digit in a 2-digit number and compose and decompose two-digit numbers using standard and non-standard partitioning. ✓ Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10. ✓ Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward ✓ Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs ✓ recognise the place value of each digit in a two-digit number (tens, ones) 																																																						
Vocabulary	<table border="0"> <tr> <td>One more</td> <td>Count</td> <td>Answer</td> </tr> <tr> <td>One less</td> <td>Numbers up to</td> <td>Equals</td> </tr> <tr> <td>Place</td> <td>twenty</td> <td>Read</td> </tr> <tr> <td>Order</td> <td>Number line</td> <td>Write</td> </tr> <tr> <td>Number</td> <td>Pictorial</td> <td></td> </tr> </table>	One more	Count	Answer	One less	Numbers up to	Equals	Place	twenty	Read	Order	Number line	Write	Number	Pictorial		<table border="0"> <tr> <td>Forwards</td> <td>More than</td> <td>Digit</td> </tr> <tr> <td>Backwards</td> <td>Less than</td> <td>Calculate</td> </tr> <tr> <td>Numerals</td> <td>Fewer</td> <td>Odd</td> </tr> <tr> <td>Words</td> <td>Most</td> <td>Even</td> </tr> <tr> <td>Multiples</td> <td>Least</td> <td>Pattern</td> </tr> <tr> <td>Equal to</td> <td>Identify</td> <td>Numbers up to one hundred</td> </tr> <tr> <td></td> <td>Represent</td> <td></td> </tr> </table>	Forwards	More than	Digit	Backwards	Less than	Calculate	Numerals	Fewer	Odd	Words	Most	Even	Multiples	Least	Pattern	Equal to	Identify	Numbers up to one hundred		Represent		<table border="0"> <tr> <td>Ones</td> <td>Greater than $>$</td> <td>Zero</td> </tr> <tr> <td>Tens</td> <td>Less than $<$</td> <td>Compare</td> </tr> <tr> <td>Two-digit</td> <td>Nearest ten</td> <td>Determine</td> </tr> <tr> <td>Estimate</td> <td>Number facts</td> <td>Value</td> </tr> <tr> <td>Place Value</td> <td>Partition</td> <td></td> </tr> <tr> <td>Solve Problems</td> <td>Count in steps</td> <td></td> </tr> </table>	Ones	Greater than $>$	Zero	Tens	Less than $<$	Compare	Two-digit	Nearest ten	Determine	Estimate	Number facts	Value	Place Value	Partition		Solve Problems	Count in steps	
One more	Count	Answer																																																							
One less	Numbers up to	Equals																																																							
Place	twenty	Read																																																							
Order	Number line	Write																																																							
Number	Pictorial																																																								
Forwards	More than	Digit																																																							
Backwards	Less than	Calculate																																																							
Numerals	Fewer	Odd																																																							
Words	Most	Even																																																							
Multiples	Least	Pattern																																																							
Equal to	Identify	Numbers up to one hundred																																																							
	Represent																																																								
Ones	Greater than $>$	Zero																																																							
Tens	Less than $<$	Compare																																																							
Two-digit	Nearest ten	Determine																																																							
Estimate	Number facts	Value																																																							
Place Value	Partition																																																								
Solve Problems	Count in steps																																																								
<p>Declarative</p> <p>I know that...</p> <p>(facts)</p>	<p>Number Facts</p> <ul style="list-style-type: none"> ✓ Know that numbers within 10 can be partitioned ✓ Know that items can be distributed fairly ✓ Know and recognise when items are distributed unfairly ✓ I know the number names ✓ I know the number bonds to 10 ✓ I know that numbers within 10 can be partitioned differently but will combine to make 10. 	<p>Number Facts</p> <ul style="list-style-type: none"> ✓ I know number bonds to 10 and number bonds for each number to 10 ✓ I know number bonds to 20 	<p>Number Facts</p> <ul style="list-style-type: none"> ✓ I know multiples of 2, 5 and 10. ✓ I know and can recall addition and subtraction facts within 10 and across 10. ✓ I know that 10 can be thought of as a single unit of 1 ten. 																																																						

<p>Procedural I know how to... (methods) In addition to Dothill Calculation Policy</p>	<p>Number Facts</p> <ul style="list-style-type: none"> ✓ Can subitise within 5 ✓ Can count beyond 20 ✓ Have a deep understanding of number to 10, including the composition of each number ✓ 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 	<p>Number Facts</p> <ul style="list-style-type: none"> ✓ Develop fluency in addition and subtraction facts within 10. ✓ Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers. ✓ Given a number, identify one more and one less ✓ Use the language of: equal to, more than, less than (fewer), most, least ✓ Identify and represent numbers using objects and pictorial representations including the number line 	<p>Number Facts</p> <ul style="list-style-type: none"> ✓ Secure fluency in addition and subtraction facts within 10, through continued practice. ✓ Identify, represent and estimate numbers using different representations, including the number line ✓ 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
<p>Declarative I know that... (facts)</p>	<p>Addition & Subtraction</p> <ul style="list-style-type: none"> ✓ Know and understand the value of number words, eg four relates to 4 objects 	<p>Addition & Subtraction</p> <ul style="list-style-type: none"> ✓ Know and can use number bonds to 10. ✓ I know that part+part=whole 	<p>Addition & Subtraction</p> <ul style="list-style-type: none"> ✓ I know that 10 ones are equivalent to 1 ten and 10 tens are equivalent to 1 hundred. ✓ I know that addition is commutative, but subtraction is not. ✓ I know addition and subtraction facts to 20 fluently. ✓ I know that addition and subtraction are inverse operations. ✓ I know that part+part=whole and whole-part=part
<p>Procedural I know how to... (methods) In addition to Dothill Calculation Policy</p>	<p>Addition & Subtraction</p> <ul style="list-style-type: none"> ✓ Subitise for up to 5 items ✓ Show a given number using fingers 	<p>Addition & Subtraction</p> <ul style="list-style-type: none"> ✓ Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. ✓ Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts. ✓ Represent and use number bonds and related subtraction facts within 20 ✓ Add and subtract one-digit and two-digit numbers to 20, including zero ✓ Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Written Methods) ✓ Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation) ✓ 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>Addition & Subtraction</p> <ul style="list-style-type: none"> ✓ Add and subtract across 10. ✓ Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?". ✓ Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. ✓ Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers. ✓ Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 ✓ Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> ✓ a two-digit number and ones ✓ a two-digit number and tens ✓ two two-digit numbers ✓ adding three one-digit numbers ✓ Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot ✓ 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: <ul style="list-style-type: none"> ✓ using concrete objects and pictorial representations, including those involving numbers, quantities and measures ✓ applying their increasing knowledge of mental and written methods

Vocabulary	Add Subtract Addition Subtraction Adding Subtracting	Number line Single digit Count on Count back Answer Doubling	Halving Sharing Numbers to twenty Check Number	One step problem Concrete object Pictorial representation Missing number Problem	Read Write Interpret Equals = Signs One-digit	Two-digit Ones Mental Mentally	Columnar addition Columnar Subtraction Tens Order Inverse	Relationship Calculation Solve problems Missing number problems Quantities Measures	Formal Written method Mental method Operation Apply Whole number		
Declarative I know that... (facts)	<u>Multiplication & Division</u>			<u>Multiplication & Division</u> ✓ I know doubles and halves of numbers to 10 ✓ I know that a multiple of 10 is made up from a number of tens			<u>Multiplication & Division</u> ✓ I know that multiplication is the same as repeated addition. ✓ I know doubles and halves of numbers to 20				
Procedural I know how to... (methods) In addition to Dothill Calculation Policy	<u>Multiplication & Division</u>			<u>Multiplication & Division</u> ✓ Count in multiples of twos, fives and tens ✓ 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			<u>Multiplication & Division</u> ✓ Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables. ✓ Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotative division). ✓ Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward ✓ Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers ✓ Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot ✓ Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs ✓ Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts				
Vocabulary	sharing doubling halving number pattern				Multiples Twos Fives Tens Number Multiply Divide	Multiplication Division One step problem Answer Concrete object	Pictorial representation Arrays Count Equals Write	Multiplication facts Division facts Multiplication tables Odd numbers Even numbers	Share Equally Repeated division Calculate		
Declarative I know that... (facts)	<u>Fractions</u>			<u>Fractions</u> ✓ I know that a half is one of two equal parts. ✓ I know that a quarter is one of 4 equal parts.			<u>Fractions</u> ✓ I know and can name fractions of shapes, set of objects or quantity.				

<p>Procedural I know how to...</p> <p>(methods)</p> <p>In addition to Dothill Calculation Policy</p>	<p><u>Fractions</u></p>	<p><u>Fractions</u></p> <ul style="list-style-type: none"> ✓ 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 	<p><u>Fractions</u></p> <ul style="list-style-type: none"> ✓ 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 e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.
<p>Vocabulary</p>		<p>Fraction Shape Half Quantity Equal parts Quarter One whole Object</p>	<p>Simple fractions Equivalent equivalence Count</p>
<p>Declarative I know that...</p> <p>(facts)</p>	<p><u>Measurement</u></p> <ul style="list-style-type: none"> ✓ I know that objects can be longer / shorter, heavier / lighter, holds more than. ✓ I know the vocabulary to use to compare measures. 	<p><u>Measurement</u></p> <ul style="list-style-type: none"> ✓ I know the names of the days of the week and months. ✓ I know that the minute hand is the long hand and the hour hand is the short hand of a clock. ✓ I know the value of different denominations of coins and notes ✓ I know the vocabulary required when comparing length, mass, capacity and time. ✓ I know the equipment needed to measure the following: ✓ lengths and heights ✓ mass/weight ✓ capacity and volume ✓ time (hours, minutes, seconds) 	<p><u>Measurement</u></p> <ul style="list-style-type: none"> ✓ I know the number of minutes in an hour and the number of hours in a day. ✓ I know the value of different denominations of coins and notes and can use this to combine amounts ✓ I know the symbols for money - £ and p ✓
<p>Procedural I know how to...</p> <p>(methods)</p> <p>In addition to Dothill Calculation Policy</p>	<p><u>Measurement</u></p> <ul style="list-style-type: none"> ✓ Compare amounts of continuous quantities (longer / shorter, heavier / lighter). 	<p><u>Measurement</u></p> <ul style="list-style-type: none"> ✓ 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] ✓ Sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] ✓ Measure and begin to record the following: ✓ lengths and heights ✓ mass/weight ✓ capacity and volume ✓ time (hours, minutes, seconds) ✓ Recognise and know the value of different denominations of coins and notes ✓ Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. ✓ Recognise and use language relating to dates, including days of the week, weeks, months and years 	<p><u>Measurement</u></p> <ul style="list-style-type: none"> ✓ Compare and order lengths, mass, volume/capacity and record the results using >, < and = ✓ Compare and sequence intervals of time ✓ 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 ✓ 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 ✓ 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.

Vocabulary	Measure Measurement Size Weight Capacity Compare Solve Problems Object Time	Length Height Long Short Longer Shorter Tall Double Half Mass Heavy Light Heavier than Lighter than Volume Full Empty More than Less than Half Half full Quarter Quicker Slower Earlier Later Sequence events Chronological order Before After Next First Today Yesterday Tomorrow Morning Afternoon Evening Record Hours Minutes Hour Half past O clock Hands Clock face Seconds Coins Notes Dates Days Weeks Months	Greater than > Less than < Equals = Intervals Standard units Estimate Direction Temperature Unit Scales Rulers Thermometers Measuring vessels Metres past Centimetres Kilograms Grams Degrees Celsius Litres Millilitres Symbols Money Pounds (£) Pence (p) Different combinations Change Five past Ten past Quarter
Declarative I know that... (facts)	<u>Statistics</u>	<u>Statistics</u>	<u>Statistics</u> ✓ I know that information can be displayed visually. ✓ I know what categorical data is.
Procedural I know how to... (methods) In addition to Dothill Calculation Policy	<u>Statistics</u>	<u>Statistics</u>	<u>Statistics</u> ✓ 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
Vocabulary			Interpret Construct Pictogram Tally chart Block diagrams Horizontal Vertical x- axis & y-axis key title chart title Simple tables Ask Answer Questions Counting Category Sort Quantity Total Compare Data Objects
Declarative I know that... (facts)	<u>Algebra</u>	<u>Algebra</u> ✓ I know number bonds to 10 and number bonds for each number to 10 ✓ I know number bonds to 20	<u>Algebra</u>

<p>Procedural I know how to... (methods) In addition to Dothill Calculation Policy</p>	<p><u>Algebra</u></p>	<p><u>Algebra</u></p> <ul style="list-style-type: none"> ✓ Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ (copied from Addition and Subtraction) ✓ Represent and use number bonds and related subtraction facts within 20 (copied from Addition and Subtraction) ✓ Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening (copied from Measurement) 	<p><u>Algebra</u></p> <ul style="list-style-type: none"> ✓ Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. (copied from Addition and Subtraction) ✓ Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 (copied from Addition and Subtraction) ✓ Compare and sequence intervals of time (copied from Measurement) ✓ Order and arrange combinations of mathematical objects in patterns (copied from Geometry: position and direction)
<p>Vocabulary</p>		<p>Solve One -step problem Missing number Check Calculate problem Sequence Chronological</p>	<p>Inverse Relationship Compare Order Arrange Pattern</p>
<p>Declarative I know that... (facts)</p>	<p><u>Geometry</u></p> <ul style="list-style-type: none"> ✓ I know the names of some 2D shapes ✓ I know positional vocabulary, such as up, down, across, behind etc. 	<p><u>Geometry</u></p> <ul style="list-style-type: none"> ✓ I know and recognise common 2D and 3D shapes presented in different orientations ✓ I know that 2D shapes are 2 dimensional and 3D shapes have three. ✓ I know the properties of common 2D and 3D shapes. 	<p><u>Geometry</u></p> <ul style="list-style-type: none"> ✓ I know and recognise standard and non-standard examples of 2D shapes presented in different orientations. ✓ I know the properties of an increasing number of 2D and 3D shapes ✓ I know what similar shapes are and can identify them. ✓ I know vocabulary connected to shapes - edges, faces, vertices.
<p>Procedural I know how to... (methods) In addition to Dothill Calculation Policy</p>	<p><u>Geometry</u></p> <ul style="list-style-type: none"> ✓ Can see, explore and discuss models of common 2D and 3D shapes with varied dimensions and presented in different orientations (for example, triangles not always presented on their base). ✓ Select, rotate and manipulate shapes for a particular purpose, for example: ✓ rotating a cylinder so it can be used to build a tower ✓ rotating a puzzle piece to fit in its place ✓ Develop spatial vocabulary 	<p><u>Geometry</u></p> <ul style="list-style-type: none"> ✓ Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another. ✓ Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations. ✓ 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]. ✓ Describe position, direction and movement, including half, quarter and three-quarter turns. 	<p><u>Geometry</u></p> <ul style="list-style-type: none"> ✓ Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties ✓ 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] ✓ Compare and sort common 2-D and 3-D shapes and everyday objects ✓ 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) ✓ Order and arrange combinations of mathematical objects in patterns and sequences

<p>Vocabulary</p>	<p>Position Distance Direction Move Movement Patterns Shape Square Rectangle Circle Triangle Sides Straight side Curved side</p>	<p>Half turn Quarter turn Three-quarter turn Left Right Up Down 2-D Shapes 3-D Shapes</p> <p>Two-dimensional Three-dimensional Cuboid Cube Pyramid Cone Cylinder Sphere</p>	<p>Rotation Right angle Clockwise Anti-clockwise Order Arrange Sequence Properties Compare Common Line symmetry Vertical line Edges Faces Vertices</p> <p>Pentagon Hexagon Heptagon Octagon Nonagon Decagon Kite Rhombus Polygon Square-based pyramid Triangular pyramid Triangular prism Rectangular prism Pentagonal prism Hexagonal prism Octagonal prism</p> <p>Octahedron Dodecahedron Tetrahedron Rectangular pyramid Pentagonal pyramid Hexagonal pyramid Octagonal pyramid</p>
<p>Conditional I know when...& I know why... (strategies)</p>	<p><u>Addition & Subtraction</u></p> <ul style="list-style-type: none"> ✓ I know when to find the total number of items in two groups by counting all of them ✓ I know why I am finding the total amount ✓ I know when to use the vocabulary involved in adding and subtracting ✓ I know why I have selected the vocabulary I am using 	<p><u>Addition & Subtraction</u></p> <ul style="list-style-type: none"> ✓ I know when to solve one-step problems ✓ I know why there is one part to the problem ✓ I know when to use addition and subtraction to solve a problem ✓ I know why I am using addition or subtraction <p><u>Multiplication & Division</u></p> <ul style="list-style-type: none"> ✓ I know when to solve one-step problems ✓ I know why there is one part to the problem ✓ I know when to use multiplication and division to solve a problem ✓ I know why I am using multiplication and division ✓ I know when to use concrete objects, pictorial representations and arrays to help me solve a problem ✓ I know why I am using concrete objects, pictorial representations and arrays to help me solve a problem <p><u>Statistics</u></p> <ul style="list-style-type: none"> ✓ I know why I am interpreting pictograms, tally charts, block diagrams and tables to solve a problem 	<p><u>Addition & Subtraction</u></p> <ul style="list-style-type: none"> ✓ I know when to use place value and number facts to solve problems ✓ I know when to use addition and subtraction to solve a problem ✓ I know why I have selected addition or subtraction to solve my problem ✓ I know when to use concrete objects and / or pictorial representations to solve a problem ✓ I know why I have chosen to use concrete objects or pictorial representations to solve a problem ✓ I know when to use a mental or written calculation ✓ I know why I have selected to use a mental or written calculation <p><u>Multiplication & Division</u></p> <ul style="list-style-type: none"> ✓ I know when to use multiplication and division to solve a problem ✓ I know why I have selected multiplication or division to solve my problem ✓ I know when to use apparatus, arrays or repeated addition to solve a problem involving multiplication or division ✓ I know why I have chosen to apparatus, arrays or repeated addition to solve a problem involving multiplication or division ✓ I know when to use a mental calculation ✓ I know why I have selected to use a mental calculation <p><u>Statistics</u></p> <ul style="list-style-type: none"> ✓ I know when to interpret pictograms, tally charts, block diagrams and tables to solve a problem ✓ I know why I am interpreting pictograms, tally charts, block diagrams and tables to solve a problem ✓ I know when to construct pictograms, tally charts, block diagrams and tables to solve a problem ✓ I know why I am constructing pictograms, tally charts, block diagrams and tables to solve a problem

<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
<u>Number & Place Value</u>	<u>Number & Place Value</u>	<u>Number & Place Value</u>	<u>Number & Place Value</u>	<u>Number & Place Value</u>	<u>Number & Place Value</u>	<u>Number & Place Value</u>
One more	Forwards	Ones	Hundreds	Thousands	Ten thousands Hundred thousands	Intervals across zero
One less	Backwards	Tens	Three-digit	Four- digit	Millions	Three decimal places
Place	Numerals	Two- digit	ten more	Negative number One thousand more	Context	Hundredths
Order	Words	Estimate	one hundred more	One thousand less	Steps of powers Decimal equivalents Two decimal places Thousandths Numbers up to one million	Thousandths
Number	Multiples	Place Value	ten less	Decimal		Ten thousandths Numbers up to ten million
Count	Equal to	Solve	one hundred less	Decimal place		
Numbers up to twenty	More than	Problems	Roman numeral Numbers up to one thousand	Rounding		
Number line	Less than	Greater than >		Place holder	<u>Addition & Subtraction</u>	<u>Addition & Subtraction</u>
Pictorial	Fewer	Less than <		Nearest ten Nearest hundred Nearest thousand	Increasingly large numbers More than 4 digits	Estimation
Answer	Most	Nearest ten	<u>Addition & Subtraction</u>	One place		Mixed operations
Equals	Least	Number facts	Three-digit number Hundreds	Whole number		
Read	Identify	Partition	Estimate	Integer		<u>Multiplication & Division</u>
Write	Represent	Count in steps	Number facts	Tenths		Scale factor
	Digit	Zero	<u>Multiplication & Division</u>	Hundredths		Long division
	Calculate	Compare	Missing number problem		<u>Multiplication & Division</u>	Whole number remainders
<u>Addition & Subtraction</u>	Odd	Determine	Estimate		Multi-step problems	Fractions
Add	Even	Value	Estimate	<u>Addition & Subtraction</u>		Rounding
Subtract	Pattern		Inverse	Two step problems		Mixed operations
Addition	Numbers up to one hundred	<u>Addition & Subtraction</u>	Formal written method	Context		
Subtraction		Columnar addition	Mathematical statement	Four-digit		<u>Measurement</u>
Adding	<u>Addition & Subtraction</u>	Columnar Subtraction	Recall	Long multiplication Short division		Decimal notation Cubic centimetres (cm ³)
Subtracting	One step problem	Tens	Integer	Remainders		Cubic metres (m ³)
Number	Concrete	Order	Two- digit	Context		Cubic millimetre (mm ³)
Number line	object	Inverse	<u>Measurement</u>	Common		Cubic kilometre (Km ³)
Single digit	Pictorial representation	Relationship	Duration	factors		Decimal places formulae
Count on	Missing number	Calculation	Time taken	Common		Miles
Count back	Problem	Solve problems	Nearest minute	Multiples		
Answer	Read	Missing number problems	Record Seconds a.m. p.m. noon midnight	Prime numbers		
Doubling	Write	Quantities	kilometre	Prime factors Composite numbers Square number		
Halving	Interpret	Measures	add	Cube number		<u>Geometry</u>
Sharing	Equals =	Formal Written method	subtract millimetres	Notation		Four quadrants
Numbers to twenty	Signs	Mental method	perimeter simple 2-D shapes	Squares		Radius
Check	One-digit	Operation	analogue	Cubes		Diameter
	Two-digit	Apply	clock roman numerals	Rectilinear shapes Convert		Circumference
<u>Multiplication & Division</u>	Ones	Whole number	12-hour		<u>Measurement</u>	Nets
sharing	Mental	<u>Multiplication & Division</u>	24-hour	<u>Measurement</u>	Square centimetres (cm ²)	<u>Fractions, Decimals & Percentages</u>
doubling	Mentally	Multiplication facts	Leap year	Co-ordinates	Square metres (m ²)	Common
halving number pattern	<u>Multiplication & Division</u>	Division facts	<u>Geometry</u>	Quadrant	Irregular shapes	factors
	Multiples	Multiplication tables	Angle	Grid	Volume (cm ³)	Common multiples
<u>Measurement</u>	Twos	Odd numbers	Turn	Translate	Cubes	Decimal fraction equivalents
Measure	Fives	Even numbers	Right angles Quarter of a turn	Translation	Cuboids Square numbers	Simplest form
Measurement	Tens	Share	Half-turn Three quarters of a turn	Axis	Cube numbers	
Size	Number	Equally	Complete turn	X- axis	Metric measure	<u>Statistics</u>
Weight	Multiply	Repeated division	Horizontal lines	Y-axis	Metric units	Pie chart
Capacity	Divide	Calculate	Vertical lines Perpendicular lines	Spaces	Imperial units	Calculate
Compare	Multiplication	<u>Measurement</u>	Parallel lines	Plot	Inches	Mean
Solve	Division	Greater than >		Point	Pounds	Average
Problems	One step problem	Less than <	<u>Fractions, Decimals & Percentages</u>	Polygon	Pints	
Object	Answer	Equals =		Lines of symmetry	<u>Geometry</u>	<u>Algebra</u>
Time	Concrete	Intervals		Symmetric figure	Reflection	Missing number
	object	Standard units		Classify	Angles	Problem
<u>Geometry</u>	Pictorial representation	Estimate		Geometric shapes		Pairs
Position	Arrays	Direction				

<p>Distance Direction Move Movement Patterns Shape Square Rectangle Circle Triangle Sides Straight side Curved side</p>	<p>Count Equals Write</p> <p><u>Measurement</u> Length Height Long Short Longer Shorter Tall Double Half Mass Heavy Light Heavier than Lighter than Volume Full Empty More than Less than Half Half full Quarter Quicker Slower Earlier Later Sequence events Chronological order Before After Next First Today Yesterday Tomorrow Morning Afternoon Evening Record Hours Minutes Hour Half past O clock Hands Clock face Seconds Coins Notes Dates Days Weeks</p>	<p>Temperature Unit Scales Rulers Thermometers Measuring vessels Metres Centimetres Kilograms Grams Degrees Celsius Litres Millilitres Symbols Money Pounds (£) Pence (p) Different combinations Change Five past Ten past Quarter past Twenty past Twenty-five past Half past Twenty-five to Twenty to Quarter to Ten to Five to</p> <p><u>Geometry</u> Rotation Right angle Clockwise Anti-clockwise Order Arrange Sequence Properties Compare Common Line symmetry Vertical line Edges Faces Vertices Pentagon Hexagon Heptagon Octagon Nonagon Decagon Kite Rhombus</p>	<p>Tenths Unit fractions Non- unit fractions Numerator Denominator Compare Order Add Subtract Solve problems</p> <p><u>Statistics</u> Present Presented Graph Statistics Bar charts Tables Solve One- step questions Two- step questions Information</p>	<p>Quadrilaterals Acute angle Obtuse angle</p> <p><u>Fractions, Decimals & Percentages</u> Hundredths Decimal Decimal place One decimal place Two decimal places Round decimals Whole number Common equivalent fractions Decimal equivalents Dividing Ones Tenths Hundredths Simple measure Money problems</p> <p><u>Statistics</u> Time graphs Comparison Problems</p> <p><u>Algebra</u> Perimeter Algebra Algebraically</p>	<p>Measure Degrees Missing lengths Missing angles Regular polygons Irregular polygons Degrees Estimate compare Reflex angle Point Straight line Multiples</p> <p><u>Fractions, Decimals & Percentages</u> Thousandths Multiples Three decimal places Per cent Number of parts per hundred Percentages Decimal fraction Mixed numbers Improper fraction Proper fraction Convert Mathematical statements Multiply Percentage and decimal equivalents</p> <p><u>Statistics</u> Timetables Line graph</p> <p><u>Algebra</u> Properties Rectangles Deduce Related facts Missing lengths Missing angles</p>	<p>Number sentence Variables Combination Possibility Enumerate Equation Formulae Generate Linear number sequence</p> <p><u>Ratio & Proportion</u> Ratio Proportion Size Quantity Missing value Integer Multiplication Division Multiply Divide Solve Problem Calculate Percentage Comparison Unequal sharing Grouping Fractions Multiples</p>
---	---	--	---	--	--	--

		<p>Months</p> <p><u>Geometry</u> Half turn Quarter turn Three-quarter turn Left Right Up Down 2-D Shapes 3-D Shapes Two-dimensional Three-dimensional Cuboid Cube Pyramid Cone Cylinder Sphere</p> <p><u>Fractions, Decimals & Percentages</u> Fraction Half Equal parts One whole Object Shape Quantity Quarter</p> <p><u>Algebra</u> Solve One -step problem Missing number Check Calculate problem Sequence Chronological</p>	<p>Polygon Square-based pyramid Triangular pyramid Triangular prism Rectangular prism Pentagonal prism Hexagonal prism Octagonal prism Octahedron Dodecahedron Tetrahedron Rectangular pyramid Pentagonal pyramid Hexagonal pyramid Octagonal pyramid</p> <p><u>Fractions, Decimals & Percentages</u> Simple fractions Equivalent equivalence Count</p> <p><u>Statistics</u> Interpret Construct Pictogram Tally chart Block diagrams Horizontal Vertical x- axis & y-axis key title chart title Simple tables Ask Answer Questions Counting Objects Category Sort Quantity Total Compare Data</p> <p><u>Algebra</u> Inverse Relationship Compare Order Arrange</p>				
--	--	---	---	--	--	--	--

			Pattern				
--	--	--	---------	--	--	--	--