

Maths Progression Map

Number and Place Value

	Counting	Steps/multiples	Negative numbers	Read/write	Compare/order	Place Value	Round	Roman numerals	Problems	Identify / represent	More / Less	General number
N	<p>Prior learning to nursery: Take part in finger rhymes with numbers</p> <p>Notice a change of amount in a group of up to three items</p> <p>Use counting like behaviour, such as making sounds, pointing, or saying some numbers in sequence</p> <p>Count in everyday contexts, sometimes</p>			<p>Through nursery: Experiments with their own symbols and marks as well as numerals</p>	<p>Prior learning to nursery: Compare amounts using vocabulary such as 'lots', 'more', 'same'.</p> <p>End of nursery: Compare quantities using language: 'more than', 'less than'</p>				<p>End of nursery: Solve real world mathematical problems with numbers up to 5</p>	<p>Through nursery: Fast recognition of up to 3 objects – subitizing</p> <p>End of nursery: Use fingers to represent amounts up to 5</p> <p>Link numerals and amounts (for example, showing the right number of objects to match the numeral, up to 5)</p>		

[illegible]

	of objects to match the numeral, up to 5											
R	<p>Early reception: Number rhymes to 5</p> <p>Subitising or count to find how many (1, 2, 3)</p> <p>Count up to 3 objects and recognise that the final number they say represents the quantity</p> <p>Mid reception:</p>	<p>Mid reception: Making pairs and understanding the meaning</p>		<p>Early reception: Mark making (focus 1-5)</p>	<p>Early reception: Comparing 1,2,3</p> <p>Ordering numbers (to 5)</p> <p>Mid reception: Compare numbers to 5 – more/same and fewer</p> <p>Comparing numbers to 10 and order three or more quantities</p> <p>End of reception: Comparing and ordering</p> <p>ELG:</p>	<p>End of reception: Composition – building numbers to 20 (and beyond)</p>			<p>Counting problems</p> <p>Problem solving/critical thinking – using familiar stories, children's play or imaginary events</p>	<p>Early reception: Representing 1,2,3 in different ways</p> <p>Match number names and quantities for 1,2,3</p> <p>Composition of 2,3</p> <p>Subitising or count to find how many (1, 2, 3)</p>	<p>Early reception: One more, one less to 5</p>	<p>Mid reception: Introducing 0 and understanding its value in real-life contexts</p> <p>Making pairs and understanding the meaning (progression to odd/even)</p> <p>End of reception: Odds and evens</p> <p>ELG:</p>

<p>Numbers 6, 7, 8</p> <p>Numbers 9 and 10</p> <p>End of reception: Counting patterns beyond 10</p> <p>Counting beyond 10</p> <p>Count to 100</p> <p>Recognise the counting system</p> <p>ELG: Have a deep understanding of number to 10, including the composition of each number;</p> <p>Verbally count beyond 20, recognising the pattern of the counting system;</p>				<p>Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;</p>					<p>Counting, representing, building numbers 4 and 5</p> <p>Continue to subitise up to 5 items</p> <p>Can represent up to 5 objects on a 5 frame</p> <p>Mid reception: Introducing 0 and understanding its value in real-life contexts</p> <p>Composition of 4 and 5</p> <p>Using 10 frames Composition of 6,7,8</p> <p>Using a tens frame</p> <p>End of reception:</p>	<p>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.</p>
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										<p>Recognise numbers to 20</p> <p>Subitising beyond 10</p> <p>Representing number stories</p> <p>Using tens frames</p> <p>Explorer and represent patterns in number like odds and evens</p> <p>ELG: Have a deep understanding of number to 10, including the composition of each number;</p> <p>Subitise (recognise quantities without counting) up to 5;</p>		
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Y 1	<p>Can I count to ten, forwards and backwards, beginning from 0 or 1, or from any given number?</p> <p>Can I count to twenty, forwards and backwards, beginning with 0 or 1, from any given number?</p> <p>Can I count to 50 forwards and backwards, beginning with 0 or 1, or from any number?</p> <p>Can I count to and across 100, forwards and backwards, beginning with 0 or 1, or from</p>	<p>Can I count forwards and backwards in multiples of tens within 100?</p> <p>Can I count forwards and backwards in multiples of twos, starting from both odd and even numbers within 50?</p> <p>Can I count forwards and backwards in multiples of fives up to 100?</p>		<p>Can I count, read and write numbers to 10 in numerals?</p> <p>Can I count, read and write numbers to 20 in numerals?</p> <p>Can I count, read and write numbers to 10 in words?</p> <p>Can I count, read and write numbers to 20 in words?</p> <p>Can I count, read and write numerals to 50?</p> <p>Can I count, read and write numbers from 1-100 in numerals?</p>						<p>Can I identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least?</p>	<p>Can I, given a number within 100, identify one more or one less?</p> <p>Can I, given a number, identify one more or one less?</p>	

	any given number?											
Y 2		Can I count in steps of 2, 3 and 5 forwards? Can I count in steps of 2, 3 and 5 from 0 backwards? Can I count in steps in tens from any number forwards? Can I count in steps in tens from any number backwards?		Can I read and write numbers to at least 100 in numerals? Can I read and write numbers to at least 100 in words?	Can I compare and order numbers from 0 up to 100; use <, > and = signs?	Can I recognise the place value of each digit in a two digit number (tens, ones)? (Pupils can partition two-digit numbers into different combinations of tens and ones.) Can I use place value and number facts to solve problems?				Can I identify, represent and estimate numbers to 100 using different representations including the number line?		Can I recognise odd and even numbers?
Y 3		Can I count from 0 in multiples of 4, 8, 50 and 100?		Can I read and write numbers up to 1000 in numerals and in words?	Can I compare and order numbers up to 1000?	Can I recognise the place value of each digit in a three-digit number (hundreds, tens, ones)?			Can I solve number problems and practical problems involving these ideas (place value)?	Can I identify, represent and estimate numbers using different representations?	Can I find 10 or 100 more or less than a given number; recognise the place value of each digit in a three digit number (hundreds, tens, ones)?	

Y 4		Can I count in multiples of 6, 7, 9, 25 and 1000?	Can I count backwards through zero to include negative numbers?		Can I order and compare numbers beyond 1000?	Can I recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones)?	Can I round any number to the nearest 10? Can I round any number to the nearest 100? Can I round any number to the nearest 1000?	Can I read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value?	Can I solve number and practical problems that involve all of the above and with increasingly large positive numbers?	Can I identify, represent and estimate numbers using different representations?	Can I find 1000 more or less than a given number?	
Y 5		Can I count forwards or backwards in steps of powers of 10 for any given number up to 1000000?	Can I interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero?	Can I read, write numbers to at least 1000000 and determine the value of each digit?	Can I order and compare numbers to at least 1000000 and determine the value of each digit?	Can I determine the value of each digit in numbers up to 1000000	Can I round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000?	Can I read Roman numerals to 1000 (M) and recognise years written in Roman numerals?	Can I solve number problems and practical problems that involve all of the above?			
Y 6			Can I use negative numbers in context, and calculate intervals across zero?	Can I read, write, numbers up to 10 000 000 and determine the value of each digit?	Can I order and compare numbers up to 10 000 000 and determine the value of each digit?	Can I determine the value of each digit in numbers up to 10 000 000	Can I round any whole number to a required degree of accuracy?		Can I solve number and practical problems that involve all of the above?			

Addition and Subtraction

	Number bonds	Addition	Subtraction	Solve problems	Mental calculation	Estimation / Inverse / Rounding	Order
N		<p>Prior learning to nursery:</p> <p>Notice a change of amount in a group of up to three items</p>	<p>Prior learning to nursery:</p> <p>Notice a change of amount in a group of up to three items</p> <p>Through nursery: songs which take away</p>	<p>End of nursery: Solve real world mathematical problems with numbers up to 5</p>			
R	<p>Composition of 1-5</p> <p>Mid reception: Number bonds to 10</p> <p>End of reception: Number bonds 10-20</p> <p>ELG: 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>	<p>Early reception: One more, one less to 5</p> <p>Mid reception: Combining 2 groups to find the how many altogether</p> <p>End of reception: Adding more and counting on</p> <p>Representing number stories</p> <p>ELG: Compare quantities up to 10 in different contexts, recognising when one quantity is</p>	<p>Early reception: One more, one less to 5</p> <p>End of reception: Representing number stories</p> <p>Taking away – using first, then, now structure and making use of tens frames</p> <p>Through reception: songs which take away</p> <p>ELG: Compare quantities up to 10 in different</p>	<p>Counting problems</p> <p>Problem solving/critical thinking – using familiar stories, children’s play or imaginary events</p>			

		greater than, less than or the same as the other quantity;	contexts, recognising when one quantity is greater than, less than or the same as the other quantity;				
Y1	<p>Can I represent and use number bonds and related subtraction facts (within 10)?</p> <p>Can I represent and use number bonds and related subtraction facts within 20?</p>	<p>Can I read, write and interpret mathematical statements involving addition and equals signs?</p> <p>Can I add one digit numbers (to 10), including zero?</p> <p>Can I add one digit and two digit numbers to 20, including zero?</p>	<p>Can I read, write and interpret mathematical statements involving subtraction and equals signs?</p> <p>Can I subtract one digit numbers (to 10), including zero?</p> <p>Can I subtract one digit and two digit numbers to 20, including zero?</p>	<p>Can I solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations?</p> <p>Can I solve one step problems that involve addition and subtraction, including missing number problems such as $7 = ? - 9$?</p>			
Y2	<p>Can I recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100?</p>	<p>Can I add 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?</p>	<p>Can I 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?</p>	<p>Can I solve more complex missing number problems?</p> <p>Can I solve problems with addition: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing</p>	<p>Can I work out mental calculations where regrouping is required?</p>	<p>Can I estimate to check that my answer to a calculation are reasonable (e.g knowing that $48 + 35$ will be less than 100).</p> <p>Can I recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve</p>	<p>Can I show that the addition of two numbers can be done in any order (commutative)</p> <p>Can I show that subtraction of one number from another cannot be done in any order?</p>

				<p>knowledge of mental and written methods?</p> <p>Can I solve problems with subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods?</p>		<p>missing number problems?</p> <p>Can I recognise the relationship between addition and subtraction?</p>	
Y3		Can I add numbers with up to three digits, using formal written methods of columnar addition.	Can I subtract numbers with up to three digits, using formal written methods of columnar subtraction?	Can I solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction (crossing 10 and 100, spotting patterns and estimation)?		Can I estimate the answer to a calculation and use inverse operations to check answers?	
Y4		Can I add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate?	Can I subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate?	Can I solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why?		Can I estimate and use inverse operations to check answers to a calculation?	
Y5		Can I add whole numbers with more than 4 digits, including	Can I subtract whole numbers with more than 4 digits, including	Can I solve addition and subtraction multi-step problems in	Can I add and subtract numbers mentally with	Can I use rounding to check answers to calculations and	

		using formal written methods (column)?	using formal written methods (column)?	contexts deciding which operations and methods to use and why?	increasingly large numbers?	determine, in the context of a problem, levels of accuracy?	
Y6				<p>Can I solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why?</p> <p>Can I solve problems involving addition, subtraction, multiplication and division?</p>		Can I use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy?	Can I use their knowledge of the order of operations to carry out calculations involving the four operations?

Multiplication and Division

	Multiples	Multiply	Division	Problem Solving	Mental calculations	Commutative	Prime numbers	Square / cubed	Multiply / divide 10,100,1000
N									
R	Mid reception: Making pairs and understanding the meaning	End of reception: Doubling ELG: Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	End of reception: Sharing equally ELG: Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.						
Y1				Can I solve one step problems involving multiplication, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher? Can I solve one step problems					

				involving division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher?					
Y2	<p>Can I recall and use multiplication and division facts for the 2, 5 and 10 times tables?.</p> <p>Can I use multiplication facts to make deductions outside known multiplication facts?</p>	<p>Can I calculate mathematical statements for multiplication within the multiplication tables and write them using the multiplication (x) and equals (=) sign?</p> <p>Can I solve problems involving multiplication, using materials, arrays, repeated addition, mental methods and multiplication, including problems in contexts?</p> <p>Can I rewrite addition statements as simplified</p>	<p>Can I calculate mathematical statements for division within the multiplication tables and write them using the division (\div) and equals (=) sign?.</p> <p>Can I determine remainders given known facts?</p>	<p>Can I solve problems involving division, using materials, mental methods and division facts, including problems in contexts?.</p> <p>Can I solve word problems that involve more than one step?</p>		<p>Can I show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot?</p>			

		multiplication statements?							
Y3	Can I recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables?	Can I write and calculate mathematical statements for multiplication using multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods?	Can I write and calculate mathematical statements for division using multiplication tables they know, using mental and progressing to formal written methods?	Can I solve problems, including missing numbers problems, involving multiplication and division, including positive integer scaling problems and corresponding problems in which n objects are connected to m objects?					
Y4	Can I recall and use multiplication and division facts for multiplication tables up to 12 x 12?	Can I multiply two digit and three digit numbers by a one digit number using formal written layout (column method)?		Can I solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects	Can I 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? Can I recognise and use factor pairs and commutatively				

				are connected to m objects?	in mental calculation?				
Y5	Can I identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers?	Can I multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers (column)?	Can I divide numbers up to 4 digits by a one digit number using the formal written method of short division appropriately for the context (bus stop)? Can I 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 (bus stop)?	Solve problems involving multiplication and division including using their knowledge of factors and multiples? Can I solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.	Can I multiply and divide numbers mentally drawing upon known facts?		Do I know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers? Can I establish whether a number up to 100 is prime and recall prime numbers up to 19?	Can I recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3)	Can I multiply and divide whole numbers by 10, 100 and 1000?
Y6	Can I identify common factors, common multiples and prime numbers?	Can I multiply multi-digit number up to 4 digits by a 2 digit number using the formal written method of long multiplication?	Can I divide numbers up to 4 digits by a 2 digit whole number using the formal written method of long division? Can I divide numbers up to 4 digits by a 2 digit whole number using	Can I solve problems involving addition, subtraction, multiplication and division? Can I use their knowledge of the order of operations to carry out	Can I perform mental calculations, including with mixed operations and large numbers?				

			<p>the formal written method of long division, and interpret remainders as whole number remainders, fractions or by rounding as appropriate for the context?</p> <p>Can I divide numbers up to 4 digits by a 2 digit number using the formal written method of short division?</p> <p>Can I divide numbers up to 4 digits by a 2 digit number using the formal written method of short division, interpreting remainders according to context?</p>	<p>calculations involving the four operations?</p> <p>Can I 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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Fractions, Decimals and Percentages

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	<p>of four equal parts of a quantity?</p> <p>Can I recognise, find and name a half as one of two equal parts of a quantity?</p> <p>Can I recognise, find and name a quarter as one of four equal parts of an object or shape?</p> <p>Can I recognise, find and name a half as one of two equal parts of an object or shape?</p>										
Y2	<p>Can I recognise, find and name fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length and shape?</p> <p>Can I recognise, find and name</p>	<p>Can I recognise, find and write fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length and shape?</p> <p>Can I recognise, find and write fractions $\frac{1}{2}$,</p>	<p>Can I recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$?</p>	<p>GD: Can I find and compare fractions of amounts?</p>							

	fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a set of objects or quantity?	$\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a set of objects or quantity? Can I write simple fractions for example, $\frac{1}{2}$ of 6 = 3?									
Y3		Can I recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators?	Can I recognise and show, using diagrams, equivalent fractions with small denominators ($\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$)?	Can I compare and order unit fractions with the same denominators? Can I compare and order non-unit fractions with the same denominators?	Can I count up and down in tenths; recognising that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10? Can I count up and down in tenths?	Can I add and subtract fractions with the same denominator within one whole?	Can I solve problems that involve all of the above?				
Y4			Can I recognise and show, using diagrams,		Can I count up and down in hundredths;	Can I add and subtract fractions with	Can I solve problems involving increasingly	Can I recognise and write decimal		Can I recognise and write decimals	

			families of common equivalent fractions?		recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten?	the same denominator?	harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number?	<p>equivalents of any number of tenths or hundredths? Can I find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths?</p> <p>Can I round decimals with one decimal place to the nearest whole number?</p> <p>Can I compare numbers with the same number of decimal places up to two decimal places?</p>	equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$?	
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Y5		Can I write mathematical statements >1 as a mixed number [for example $+ = = 1$]?	Can I identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths? Can I recognise mixed numbers and improper fractions and convert from one form to the other	Can I compare and order fractions whose denominators are multiples of the same number.		Can I add and subtract fractions with the same denominator? Can I add and subtract fractions with denominators that are multiples of the same number? Can I multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams?		Can I read and write decimal numbers as fractions [for example $0.71 = 71/100$]? Can I read, write, order and compare numbers with up to three decimal places? Can I recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents? Can I round decimals with two decimal places to the nearest whole number and to one decimal place? Can I solve problems	Can I 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?		Can I solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates? Can I solve problems which require knowing percentage and decimal equivalents of $1/2, 1/4, 1/5, 2/5$, and those fractions with a denominator of a multiple of 10 or 25? Can I use all four operations to solve problems involving measure [for example, length, mass, volume, money] using
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								involving number up to three decimal places? Can I multiply and divide whole numbers and those involving decimals by 10, 100 and 1000			decimal notation, including scaling?
Y6		Can I use common factors to simplify fractions; use common multiples to express fractions in the same denomination?		Can I compare and order fractions, including fractions > 1 ?	Can I generate and describe linear number sequences (with fractions)?	Can I add fractions with different denominations and mixed numbers, using the concept of equivalent fractions? Can I subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions? Can I multiply simple pairs of proper fractions, writing the		Can I identify the value of each digit in numbers given to three decimal places and multiply numbers by 10, 100 and 1000 giving answers up to 3dp? Can I multiply one digit numbers with up to 2dp by whole numbers?	Can I use of percentages for comparison? Can I solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360]?	Can I associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example $\frac{3}{8}$]? Can I recall and use equivalences between simple fractions, decimals and percentages, including in	Can I solve problems which require answers to be rounded to specified degrees of accuracy?

						<p>answer in its simplest form [for example $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]?</p> <p>Can I divide proper fractions by whole numbers [for example $\frac{1}{3} \div 2 = \frac{1}{6}$]?</p>		Can I use written division methods in cases where the answer has up to two decimal places?		different contexts?	
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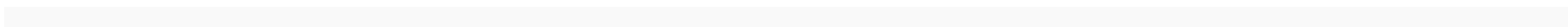
Ratio and Proportion

N	
R	
Y1	
Y2	
Y3	
Y4	
Y5	
Y6	<p>Can I solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts?</p> <p>Can I solve problems involving similar shapes where the scale factor is known or can be found?</p> <p>Can I solve problems involving unequal sharing and grouping using knowledge of fractions and multiples?</p>

Algebra

N	
R	
Y1	
Y2	
Y3	
Y4	
Y5	
Y6	<p>Can I use simple formulae?</p> <p>Can I generate and describe linear number sequences?</p> <p>Can I express missing number problems algebraically ($3x + 2 = 14$)?</p> <p>Can I find pairs of numbers that satisfy an equation with two unknowns?</p> <p>Can I enumerate possibilities of combinations of two variables?</p> <p>Can I illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius?</p>

	Can I interpret and construct pie charts and use these to solve problems? Can I interpret and construct line graphs and use these to solve problems? Can I calculate the mean as an average?
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Graphs and Statistics

	Interpret, construct, present	Ask and answer questions
N		
R		
Y1		
Y2	<p>Can I interpret and construct a simple pictograms?</p> <p>Can I interpret and construct a tally charts?</p> <p>Can I interpret and construct a simple block diagrams?</p> <p>Can I interpret and construct a simple tables?</p>	<p>Can I ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity?</p> <p>Can I ask and answer questions about totalling and comparing categorical data?</p>
Y3	<p>Can I interpret and present data using bar charts, pictograms and tables?</p>	<p>Can I 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?</p>
Y4	<p>Can I interpret and present discrete and continuous data using appropriate graphical methods, including bar charts?</p> <p>Can I interpret and present discrete and continuous data</p>	<p>Can I solve comparison, sum and difference problems using information presented in bar charts?</p> <p>Can I solve comparison, sum and difference problems using</p>

	using appropriate graphical methods, including time graphs?	information presented in pictograms? Can I solve comparison, sum and difference problems using information presented in tables and other graphs?
Y5	Can I complete, read and interpret information in tables including timetables?	Can I solve comparison, sum and difference problems using information presented in a line graph?
Y6		

Measurement

	General	Perimeter	Area	Money	Time
N	<p>Prior to nursery: Compare sizes, weights, etc using gesture and language – ‘bigger/little/smaller’, ‘high/low’, ‘tall’, ‘heavy’</p>				<p>Through nursery: Begin to describe a sequence of events real or fictional, using words such as: first, then</p>
R	<p>Early reception: Comparing amounts/size/mass/capacity</p> <p>Using balance scales</p> <p>Mid reception: Compare mass and building up their vocabulary linked to this concept</p> <p>Compare capacity and building up their vocabulary linked to this concept</p> <p>Length and height and relevant vocabulary (length: longer/shorter; height: taller/shorter; breadth: wider/narrower)</p>				<p>Early reception: Ordering routines in their day</p> <p>Language (eg first, next , after that, then, now, later’)</p> <p>Mid reception: Time – developing their language to describe the sequence of their day</p>
Y1	Can I compare, describe and solve practical problems for lengths and heights, for example long/short,			Can I recognise and know the value of different denominations of coins and notes and add simple amounts together?	Can I tell the time to the hour? Can I tell the time to the half past the hour?

	<p>longer/shorter, tall/short, double/half?</p> <p>Can I measure and begin to record lengths and heights with both standard and non-standard measures?</p> <p>Can I compare, describe and solve practical problems for 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> <p>Can I measure and begin to record mass/weight, capacity and volume with both standard and non-standard measures?</p>			<p>Can I recognise and know the value of different denominations of coins and notes and add simple amounts together?</p>	<p>Can I draw the hands on a clock face to show the time to the hour and half past?</p> <p>Can I recognise and use language relating to dates, including days of the week, weeks, months and years?</p> <p>Can I compare, describe and solve practical problems for time [for example, quicker, slower, earlier and later]?</p> <p>Can I begin to record the time (hours, minutes and seconds)?</p> <p>Can I sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]?</p>
Y2	<p>Can I choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit, using rulers?</p> <p>Can I choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit, using scales?</p> <p>Can I compare and order length and mass and record the results using >, < and =?</p> <p>Can I choose and use appropriate standard units to estimate and measure temperature (°C) to the nearest appropriate unit, using thermometers?</p> <p>Can I choose and use appropriate standard units to</p>			<p>Can I recognise and use symbols of pounds (£) and pence (p); combine amounts to make a particular value?</p> <p>Can I find different combinations of coins that equal the same amounts of money?</p> <p>Can I solve simple problems in a practical context involving addition of money of the same unit?</p> <p>Can I solve simple problems in a practical context involving subtraction of money of the same unit, including giving change?</p>	<p>Can I read the time on the clock to the nearest 15 minutes?</p> <p>Can I tell and write the time, including quarter past/to the hour and draw the hands on a clock face to show these times?.</p> <p>Can I tell and write the time to five minutes and draw the hands on a clock face to show these times?</p> <p>Can I know the number of minutes in an hour and the number of hours in a day?</p> <p>Can I compare and sequence intervals of time?</p>

	<p>estimate and measure capacity (litres/ml) to the nearest appropriate unit, using measuring vessels?</p> <p>Can I read scales in divisions of ones, twos, fives and tens in a practical situation where all numbers on the scale are given?</p> <p>Can I compare and order volume/capacity and record the results using $>$, $<$ and $=$?</p>				
Y3	<p>Can I measure, compare, add and subtract: lengths (m/cm/mm) including decimals?</p> <p>Can I measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml)?</p> <p>Can I measure, compare, add and subtract: volume/capacity (l/ml)?</p> <p>Can I continue to measure using the appropriate tools and units, progressing to using a wider range of measures (g/kg, l/ml, mm/cm/m/km), including comparing and using mixed units (for example, 1kg and 200g) and simple equivalents of mixed units (for example, 5m = 500cm)?</p>	Can I measure the perimeter of simple 2D shapes?		Can I add and subtract amounts of money to give change using both £ and p in practical context?	<p>Can I tell and write the time from an analogue clock, including using Roman numerals and 12-hour?</p> <p>Can I tell and write the time from an analogue clock, including 24-hour clocks?</p> <p>Can I record and compare time in terms of seconds, minutes and hours?</p> <p>Can I understand the relationship between digital and an analogue clock?</p> <p>Can I use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight?</p> <p>Do I know the number of seconds in a minute and the number of days in each month, year and leap year?</p> <p>Can I compare durations of events (for example to calculate the time taken by particular events or tasks)?</p> <p>Can I estimate and read time with increasing accuracy to the nearest minute?</p>

Y4	<p>Can I convert between different units of measure eg kilometre to metre?</p> <p>Can I solve simple measure problems involving fractions and decimals to two decimal places?</p>	<p>Can I measure and calculate the perimeter of a rectilinear figure (including squares) in cm and m?</p>	<p>Can I find the area of rectilinear shapes by counting squares?</p>	<p>Can I estimate, compare and calculate different measures, including money in pounds and pence?</p> <p>Can I solve simple money problems involving fractions and decimals to two decimal places?</p>	<p>Can I convert between different units of measure for example hours to minutes?</p> <p>Can I read, write and convert between analogue and digital 12 hour and 24 hour clocks?</p> <p>Can I solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days?</p>
Y5	<p>Can I estimate volume [for example using 1cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]?</p> <p>Can I use all four operations to solve problems involving measure?</p>	<p>Can I measure and calculate the perimeter of composite rectilinear shapes in cm and m?</p>	<p>Can I calculate and compare the area of rectangles (including squares), and including using standard units, cm²,m² estimate the area of irregular shapes?</p>		
Y6	<p>Can I solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate?</p> <p>Can I use, read, write and convert between standard units, converting measurements of length from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp?</p> <p>Can I use, read, write and convert between standard units, converting measurements of mass from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp?</p>	<p>Can I recognise that shapes with the same areas can have different perimeters and vice versa?</p>	<p>Can I recognise when it is possible to use formulae for area and volume of shapes?</p> <p>Can I calculate the area of parallelograms?</p> <p>Can I calculate the area of triangles?</p>		

	<p>Can I use, read, write and convert between standard units, converting measurements of volume from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp?</p> <p>Can I use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp?</p> <p>Can I convert between miles and kilometres?</p> <p>Can I calculate and estimate volume of cubes and cuboids using standard units, including cm^3, m^3 and extending to other units (mm^3, km^3)?</p> <p>Can I compare volume of cubes and cuboids using standard units, including cm^3, m^3 and extending to other units (mm^3, km^3)?</p> <p>Can I convert between different units of metric measure (for example, km and m; cm and m; cm and mm; g and kg; l and ml)?</p> <p>Do I understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints?</p> <p>Can I solve problems involving converting between units of time?</p>				
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Geometry: Properties of Shape

		Patterns, order, arrange	2D and 3D shape	Angles	Specific properties	Compare, sort, classify
N		<p>Prior learning to nursery: Build with a range of resources</p> <p>Notice simple patterns and begin to match them</p> <p>Completes a simple puzzle</p> <p>Through nursery: Select shapes appropriately; flat surface for building a triangular prism for a roof, etc</p> <p>Talk about and identify the patterns around them, use informal language like; pointy, spotty, blobs, stripy</p> <p>End of nursery: Begin to talk about simple repeated patterns</p>	<p>Prior learning to nursery: Climb and squeeze themselves into different types of spaces</p> <p>Through nursery: Talk about and explore 2D shapes, playing freely with blocks, shapes, shape puzzles and shape-sorters.</p> <p>Talk about and explore 3D shapes using informal and mathematical language: sides, corners, straight, flat, round</p>		<p>Through nursery: Talk about and explore 3D shapes using informal and mathematical language: sides, corners, straight, flat, round</p>	<p>End of nursery: Make comparisons between objects relating to size, length, weight, and capacity</p>

		Combine shapes to make a shape picture – eg: house, rockets, flowers, trains.				
R		<p>Early reception: Copy, continue and create their own simple patterns</p> <p>Combining shapes</p> <p>Mid reception: Pattern - building on AB patterns to ABBA</p> <p>Through reception: jigsaws, shape puzzles and tangrams</p> <p>End of reception: Shapes can be combined and separated to make other shapes (including with triangles)</p>	<p>Early reception: Circles and triangles</p> <p>Mid reception: 3D shapes/ naming and talking about similarities and differences</p>		<p>Early reception: Identifying shapes with 4 sides</p> <p>Mid reception: 3D shapes/ naming and talking about similarities and differences</p>	<p>Early reception: Find and match objects which are the same</p> <p>Sorting objects into sets such as colour, size, or shape</p> <p>Odd one out</p> <p>End of reception: Sorting and matching (including finding a matching shape, even where there is change of orientation)</p>
Y1			<p>Can I recognise, name and describe simple properties of common 2D shapes, including rectangles, squares, circles and triangles?</p> <p>Can I recognise, name and describe simple properties of common 3D shapes, including</p>			

			cuboids, pyramids and spheres?			
Y2					<p>Can I identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line?</p> <p>Can I describe similarities and differences of shape properties?</p> <p>Can I identify lines of symmetry in a 2D shape?</p> <p>Can I identify and describe the properties of 3D shapes, including the number of edges, vertices and faces?</p> <p>Can I identify 2D shapes on the surface of 3D shapes, [for example, a circle on a cylinder and a triangle on a pyramid?</p>	Can I compare and sort common 2D and 3D shapes and everyday objects?
Y3			Can I draw 2-D shapes and make 3-D shapes using modelling materials?	<p>Can I recognise angles as a property of shape or a description of a turn?</p> <p>Can I identify whether angles are greater than</p>	<p>Can I identify horizontal and vertical lines and pairs of perpendicular and parallel lines?</p> <p>Can I recognise 3-D shapes in different</p>	

				<p>or less than a right angle?</p> <p>Can I identify right angles, recognise that two right angles make a half-term, three make three quarters of a turn and four a complete turn?</p>	<p>orientations and describe them?</p>	
Y4				<p>Can I identify acute and obtuse angles and compare and order angles up to two right angles by size?</p>	<p>Can I identify lines of symmetry in 2D shapes presented in different orientations?</p> <p>Can I complete a simple symmetric figure with respect to a specific line of symmetry?</p>	<p>Can I compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes?</p>
Y5			<p>Can I identify 3D shapes, including cubes and other cuboids, from 2D representations?</p>	<p>Do I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles?</p> <p>Can I draw given angles, and measure them in degrees ($^{\circ}$)?</p> <p>Can I identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) other multiples of 90°?</p>	<p>Can I use the properties of rectangles to deduce related facts and find missing lengths and angles?</p> <p>Can I distinguish between regular and irregular polygons based on reasoning about equal sides and angles?</p>	

Y6			<p>Can I draw 2D shapes using given dimensions and angles?</p>	<p>Can I recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles?</p> <p>Can I find unknown angles in any triangles?</p> <p>Can I find unknown angles in quadrilaterals and regular polygons?</p>		<p>Can I compare and classify geometric shapes based on their properties?</p>
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Geometry: Position and Direction

	Describe	Order and arrange	Co-ordinates / quadrants	Reflection and translation
N	<p>Through nursery: Discuss routes and locations using words like 'in front of' and 'behind', reading stories about journey's, such as Rosie's Walk</p> <p>End of nursery: Understand position through words alone, for example 'The bag is under the table' with no pointing.</p>			
R	<p>Early reception: Spatial awareness Positional language (eg behind, next to, over, between, beside)</p>			
Y1				
Y2	Can I 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?	Can I order and arrange combinations of mathematical objects in patterns and sequences?		

Y3				
Y4			<p>Can I describe movements between positions as translations of a given unit to the left/ right and up/ down?</p> <p>Can I plot specified points and draw sides to complete a given polygon?</p> <p>Can I describe positions on a 2D grid as coordinates in the first quadrant?</p>	
Y5				<p>Can I identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed?</p>
Y6				