

Numeracy Skills Progression								
EYFS Skills	KS1 Skills	Year 1	Year 2	KS2 Skills	Year 3	Year 4	Year 5	Year 6
Primary Progression Vocabulary								
Build up vocabulary that reflects the breadth of their experiences. Extend vocabulary, especially by grouping and naming, exploring the meaning and sounds of new words.	Mathematical Vocabulary			Mathematical Vocabulary	Read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling. To read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.		Read, spell and pronounce mathematical vocabulary correctly. To read, spell and pronounce mathematical vocabulary correctly	
Primary Progression Place Value								
Recognise and count reliably with numbers 1-20 and place them in order.	Counting	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.	Count in steps of 2, 3, 5 and 10 from 0, and in tens from any number, forward and backward.	Counting	Continue to count in ones, tens and hundreds, so that pupils become fluent in the order and place value of numbers to 1000. Count from 0 in multiples of 4, 8, 50 and 100.	Count in tens and hundreds, and maintain fluency in other multiples through varied and frequent practice. Count in multiples of 6, 7, 9, 25 and 1000. To count backwards through zero to include negative numbers. Find 1000 more or less than a given number	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	Use negative numbers in context, and calculate intervals across zero.
Records using marks that they can	Identify Represent Numbers	Identify and represent numbers using objects and	Read and write numbers to at least 100 in numerals and in words.	Identify Represent Numbers	Identify, represent and estimate numbers using different representations		Read write, (order and compare) numbers to at least 1000,000 and	Read write, (order and compare) numbers to at least 10,000,000 and

interpret and explain.		pictorial representations.	Identify, represent and estimate numbers using different representations, including the number line.				determine the value of each digit	determine the value of each digit
		Read and write numbers to 100 in numerals.			Read and write numbers from 1 to 20 in numerals and words	Read and write numbers up to 1000 in numerals and in words	Read Roman Numeral to 100 and know that over time the numeral system changed to include the concept of zero and place value	Read Roman Numerals to 1000 (M) and recognise years written in Roman Numerals
Say which number is one more or less than a given number to 20	Use Place value and compare	Identify one more or one less	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.	Use Place Value and Compare	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) Compare and order numbers up to 1000	Find 1000 more or less than a given number Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, ones) Order and compare numbers beyond 1000	(read, write) order and compare numbers up to 1000000 and determine the value of each digit	(read, write) order and compare numbers up to 10000000 and determine the value of each digit
	Problems and Rounding	Use place value and number facts to solve problems.	Solve number problems and practical problems involving these ideas.	Problems and Rounding	Solve number problems and practical problems involving these ideas	Round any number to the nearest 10, 100 or 1000 Solve number and practical problems that involve all of the above and increasingly large positive numbers	Interpret negative numbers in context Round any number up to 1,000,000 to the nearest 10, 100,1000,10,000 and 100,000 Solve number problems and practical problems that involve all of the above	Round any whole number to a required degree of accuracy Use negative numbers in context, and calculate intervals across zero Solve number and practical problems that involve all of the above
Primary Progression Addition and Subtraction								

Use quantities and objects children add and subtract two single digit numbers and count on or back to find the answer.	Recall, Represent, Use	Read, write and interpret mathematical statements involving addition, subtraction and equal signs. Represent and use number bonds and related subtraction facts to 20.	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Show 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.	Recall, Represent, Use	Estimate the answer to a calculation and use inverse operations to check answers	Estimate and use inverse operations to check answers to a calculation	Use rounding to check answers to a calculation	
Add and subtract two single-digit numbers.	Calculations	Add and subtract one digit and two digit numbers to 20, including zero.	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <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 	Calculations	Add and subtract numbers mentally including: <ul style="list-style-type: none"> ➤ A 3-digit number and ones ➤ A 3-digit number and tens ➤ A 3-digit number and hundreds Add and subtract numbers with up to three digits using formal written methods of column addition and subtraction	Add and subtract numbers with up to four digits using formal written methods of column addition and subtraction where appropriate	Add and subtract numbers with more than four digits using formal written methods of column addition and subtraction Add and subtract numbers mentally with increasingly large numbers	Perform mental calculations, including with mixed operations and large numbers Use their knowledge of the order of operations to carry out calculations involving the four operations

Identifies own mathematical problems based on own interests and fascinations.	Solve Problems	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = [] - 9$	Solve problems with addition and subtraction: <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 	Solve Problems	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	Solve addition and subtraction two-step problems in contexts deciding which operations and methods to use and why	Solve addition and subtraction multi-step problems in contexts deciding which operations and methods to use and why Solve problems involving addition, subtraction, multiplication and division and a combination of these including understanding the meaning of =	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
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Primary Progression Multiplication and Division

	Recall, Represent, Use		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	Recall, Represent, Use	Recall and use multiplication and division facts for the 3,4 and 8 x tables	Recall and use multiplication and division facts up to 12 x Use place value known and derived facts to multiply and divide mentally including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers Recognise and use factor pairs and commutativity in mental calculations	Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Establish whether a number up to 100 is prime and recall prime numbers up to 19 Recognise and use square numbers and	Identify common factors, common multiples and prime numbers Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
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							cube numbers and the notation for squared ² and cubed ³	
	Calculations		Calculate mathematical statements for multiplication and division tables and write them using multiplication, division and equal signs	Calculations	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	<p>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</p> <p>Multiply and divide numbers mentally drawing upon known facts</p> <p>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</p> <p>Multiply and divide whole numbers and those involving decimals by 10,100 and 1000</p>	<p>Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</p> <p>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</p> <p>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</p> <p>Perform mental calculations,</p>

								including with mixed operations and large numbers
Solve problems involving doubling halving and sharing.	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 contexts	Solve Problems	Solve problems including missing number problems involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	Solve problems involving multiplying and adding, including using the distributive law to multiply two- digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	Solve problems involving addition, subtraction, multiplication and division
	Combined Operations			Combined Operations			Solve problems involving addition, subtraction, multiplication and division and a combination of these including understanding the meaning of the =	Use their knowledge of the order of operations to carry out calculations involving the four operations
Primary Progression-Fractions, Decimals, Percentages								
Solve problems involving doubling halving and sharing.	Recognise and Write Fractions	Recognise, find and name a half as one of two equal parts of an object, shape or quantity Recognise, find and name a quarter as	Recognise, find, name and write fractions; one third, one quarter, two quarters and three quarters of a length, shape, set of objects or quantity	Recognise and Write Fractions	Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10	Count up and down in hundredths; recognise that hundredths arise from dividing an object by one hundred and dividing tenths by ten	Identify name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	

		one of four equal parts of an object, shape or quantity			<p>Recognise, find and write fractions of a discrete set of objects: unit fractions and non- unit fractions with small denominators</p> <p>Recognise and use fractions as numbers; unit fractions and non- unit fractions with small denominators</p>		Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number	
	Compare Fractions		Recognise the equivalence of two quarters and one half	Compare Fractions	<p>Recognise and show using diagrams, equivalent fractions with small denominators</p> <p>Compare and order unit fractions, and fractions with the same denominators</p>	Recognise and show using diagrams, families of common equivalent fractions	Compare and order fractions whose denominators are all multiples of the same number	<p>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</p> <p>Compare and order fractions including fractions >1</p>
	Calculate Fractions		Write simple fractions for example half of 6 =3	Calculate Fractions	Add and subtract fractions with the same denominator within one whole denominator $5/7 + 1/7 = 6/7$	Add and subtract fractions with the same denominator.	<p>Add and subtract fractions with the same denominator and denominators that are multiples of the same number</p> <p>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</p>	<p>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</p> <p>Multiply simple pairs of proper fractions writing the answer in its</p>

								<p>simplest form e.g. $\frac{1}{4}$ $\times \frac{1}{2} = \frac{1}{8}$</p> <p>Divide proper fractions by whole numbers e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$</p>
	Solve Fraction Problems			Solve Fraction Problems	Solve problems that involve all of the above	Solve problems involving increasingly harder fractions to calculate quantities and fractions to divide quantities, including non-unit fractions where the answer is a whole number		
	Recognise and Write Decimals			Recognise and Write Decimals		<p>Recognise and write decimal equivalents of any number of tenths or hundredths</p> <p>Recognise and write decimal equivalents to $\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$</p>	<p>Read and write decimal numbers as fractions e.g. $0.71 = \frac{71}{100}$</p> <p>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</p>	Identify the value of each digit in numbers given to three decimal places
				Compare Decimals		<p>Round decimals with one decimal place to the nearest whole number</p> <p>Compare numbers with the same number of decimal places up to two decimal places</p>	<p>Round decimals with two decimal places to the nearest whole number and to one decimal place</p> <p>Read, write, order and compare numbers with up to three decimal places</p>	

	Decimal: Calculations and Problems			Decimal: Calculations and Problems		Find the effect of dividing a one or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths	Solve problems involving number up to 3 decimal places	<p>Multiply and divide numbers by 10, 100 and 1000 giving up to 3 decimal places</p> <p>Multiply one-digit numbers with up to two decimal places by whole numbers</p> <p>Use written methods in cases where the answer has up to two decimal places</p> <p>Solve problems which require answers to be rounded to specified degrees of accuracy</p>
	Fractions, Decimals and Percentages			Fractions, Decimals and Percentages		Solve simple measure and money problems involving fractions and decimals to two decimal places	<p>Recognise the % 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</p> <p>Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{5}$ $\frac{2}{5}$ $\frac{4}{5}$ and those fractions with a denominator</p>	<p>Associate a fraction with division and calculate decimal fraction equivalents e.g. $0.375 = \frac{3}{8}$</p> <p>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</p>

							of a multiple of 10 or 25	
Primary Progression Ratio and Proportion								
	Ratio and Proportion			Ratio and Proportion				<p>Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>Solve problems involving the calculation of %'s and the use of %'s for comparison</p> <p>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</p> <p>Solve problems involving similar shapes where the scale factor is known or can be found</p>
Primary Progression Algebra								
	Algebra	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial	Recognise and use inverse relationship between addition and subtraction and use this to check calculations	Algebra	Solve problems including missing number problems			<p>Use simple formulae</p> <p>Generate and describe linear number sequences</p>

		representations, and missing number problems such as $7 = [] - 9$	and solve missing number problems					Express missing number problems algebraically
								Find pairs of numbers that satisfy an equation with two unknowns
								Enumerate possibilities of combinations of the same variables

Primary Progression Measurement

Use everyday language to talk about size, weight, capacity and distance.	Using Measure	Compare, describe and solve practical problems for: <ul style="list-style-type: none"> ➤ Lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) ➤ Mass/weight (for example, heavy/light, heavier than, lighter than) ➤ Capacity and volume (for example, full/empty, more than, less than, half, half full, quarter) ➤ Time (for example, 	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, thermometres and measuring vessels compare and order length, mass, volume/capacity and record the results using $>$, $<$ and $=$	Using Measure	Measure, compare, add and subtract: lengths (m,cm,mm) Mass (g,kg) Volume/capacity (l,ml)	Convert between different units of measure e.g. km-m, hours to minutes	Convert between different units of metric measure e.g. km and m, cm and metre, litre and ml	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate
Order two or three items by length, weight, height and capacity.								
						Use all four operations to solve problems involving measure using decimal notation including scaling		

		<p>quicker, slower, earlier, later)</p> <ul style="list-style-type: none"> ➤ Measure and begin to record the following: ➤ Lengths and heights ➤ Mass/weight ➤ Capacity and volume ➤ Time (hours, minutes, seconds) 						Convert between miles and kilometres
Use everyday language to talk about money.	Money	Recognise and know the value of different denominations of coins and notes.	<p>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</p> <p>Find different combinations of coins that equal the same amounts of money</p> <p>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</p>	Money	Add and subtract amounts of money to give change using £ and p in practical contexts	Estimate, compare and calculate different measures, including money in pounds and pence	Use all four operations to solve problems involving money	
Use everyday language to talk about time.	Time	Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)	<p>Compare and sequence intervals of time</p> <p>Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a</p>	Time	Tell and write the time from an analogue clock, including using Roman Numerals from 1-12 and 12 hr and 24 hr clocks	<p>Read, write and convert time between analogue and digital, 12- and 24-hour clocks</p> <p>Solve problems involving converting from hours to minutes; minutes to</p>	Solve problems involving converting between units of time	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

Orders and sequences three events within a day.		<p>Recognise and use language relating to dates, including days of the week, weeks, months, years</p> <p>Tell the time to the hour and half past the hour and draw the hands on the clock.</p>	<p>clock face to show these times</p> <p>Know the number of minutes in an hour and the number of hours in a day</p>		<p>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, am/pm, morning, afternoon, noon and midnight</p> <p>Know the number of seconds in a minute and the number of days in a month, year and leap year</p> <p>Compare durations of events</p>	seconds; years to months; weeks to days		
	Perimeter, Area and Volume			Perimeter, Area and Volume	<p>Measure the perimeter of simple 2-D shapes</p>	<p>Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</p> <p>Find the area of rectilinear shapes by counting squares</p>	<p>Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</p> <p>Calculate and compare the area of rectangles and including using standard units, square cm and square metres and estimate the area of irregular shapes</p> <p>Estimate volume e.g. using 1 cm³ blocks to</p>	<p>Recognise that shapes with the same areas can have different perimeters and vice versa</p> <p>Recognise when it is possible to use formulae for area and volume of shapes</p> <p>Calculate the area of parallelograms and triangles</p> <p>Calculate, estimate and compare</p>

							build cuboids and capacity using water	volume of cubes and cuboids using standard units including cubic centimetres and cubic metres and extending to other units.
Explore the characteristics of everyday objects and 2D shapes and use mathematical language to describe them.	2D Shapes	Recognise and name common 2D shapes (for example, rectangles, (including squares), circles and triangles)	Identify and describe the properties of 2D shapes, including the number of sides and lines of symmetry in a vertical line Identify 2D shapes on the surface of 3D shapes, (for example, a circle on a cylinder and a triangle on a pyramid) Compare and sort common 2D shapes and everyday objects	2D Shapes	Draw 2D Shapes	Compare and classify geometric shapes including quadrilaterals and triangles, based on their properties and sizes Identify lines of symmetry in 2D shapes presented in different orientations	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 2D shapes using given dimension and angles Compare and classify geometric shapes based on their properties and sizes Illustrate and name parts of circles including radius, diameter and circumference and know that the diameter is twice the radius
Explore the characteristics of everyday objects and 3D shapes and use mathematical language to describe them.	3D Shapes	Recognise and name common 3D shapes (for example, cuboids (including cubes), pyramids and spheres)	Recognise and name common 3D shapes (for example, cuboids (including cubes), pyramids and spheres) Compare and sort 2D shapes and everyday objects	3D Shapes	Make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them		Identify 3D shapes, including cubes and other cuboids, from 2D representations	Recognise, describe and build simple 3D shapes, including making nets
	Angles and Lines			Angles and Lines	Recognise angles as a property of shape or a description of a turn	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	Find unknown angles in any triangle,

					Identify right angles, recognise that two right angles make a half turn, three make three quarters of a turn and four make a whole turn; identify whether angles are greater than or less than a right angle Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	Identify lines of symmetry in 2D shapes presented in different orientations Complete a simple symmetric figure with respect to a specific line of symmetry	obtuse and reflex angles Draw given angles, and measure them in degrees Identify <ul style="list-style-type: none"> ➤ Angles at a point and one whole turn 360° ➤ Angles at a point on a straight line and $\frac{1}{2}$ a turn 180° ➤ Other multiples of 90° 	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
Use everyday language to talk about position and direction.	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 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)	Position and Direction		Describe positions on a 2D grid as coordinates in the first quadrant Describe movements between positions as translations of a given unit to the left/right and up/down Plot specified points and draw sides to complete a given polygon	Identify, describe and represent the position of a shape following up a reflection or translation, using the appropriate language, and know that the shape has not changed	Describe positions on the full coordinate grid (all 4 quadrants) Draw and translate simple shapes on the coordinate plane, and reflect them in the axis
Primary Progression Statistics								
Record, using marks that they can	Present and Interpret		Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	Present and Interpret	Interpret and present data using bar charts, pictograms and tables	Interpret and present discrete and continuous data using appropriate graphical methods	Complete, read and interpret information in tables, including timetables	Interpret and construct pie charts and line graphs and

interpret and explain.						including bar charts and time graphs		use these to solve problems
	Solve Problems		Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity Ask and answer questions about totalling and comparing categorical data	Solve problems	Solve one-step and two-step questions e.g. How many more? Using information presented in scaled bar charts, pictograms, tables and other graphs	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