Progression of Skills

Maths

	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Number	Count beyond 20 (first to 5, then 10, then to 20) Count actions, objects and sounds Recognise numerals to 10 Write numbers to 10 Subitise (first to 3, then to 5 and then 6 in regular and irregular arrangements) Compare numbers to 10, using more than, fewer than, equal to Identify a number that is 1 more or 1 less than a 1 digit number.	Make different number bonds for numbers up to 10. Count to and across 100 (first 0 – 10, then to 20, then to 40 then to 100). Count forwards, backwards, beginning with 0 or 1 or from any given number Read and write numbers from 0 to 100 in numerals (first 0 – 10, then to 20, then to 40 then to 100). Read and write numbers from 1 to 20 in numerals and words. Compare and order numbers from 0 to 100 (first 0 – 10, then to 20, then to 40 then to 100).	Count to 100 in steps of 1 and 10 from any number, forward and backward. Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Read and write numbers to 100 (in numerals and words), recognising the place value of each digit. Compare and order numbers within 100 using the <, > and = signs. Make and complete number patterns. Identify, represent and estimate numbers using	Count in hundreds to 1000. Count in fifties. Count in fours and eights. Recognise the value of a digit in a 3 digit number. Compare and order numbers within 1000 and complete number patterns. Find 10 or 100 more or less than a given number Identify, represent and estimate numbers using different representations Read and write numbers up to 1000 in numerals and in words	Count to 10 000. Count in thousands, hundreds, tens and ones. Count in twenty-fives, sixes, sevens and nines. Find 1000 more or less than a given number Recognise the place value of each digit in a four-digit number Compare and order numbers within 10 000. Identify, represent and estimate numbers using different representations Describe and complete number patterns.	Read and write numbers to 1 000 000. Determine the place value of a digit in a number . Compare and order numbers within 1 000 000. Count forwards or backwards in steps of 1000, 10 000 and 100 000. Round numbers to the nearest 10, 100, 1000, 10000 and 100 000. Solve number problems and practical problems	Read and write numbers to 10 million. Compare and order numbers within 10 million. Tell the place value of a digit in a number. Round numbers accurately to the nearest 10, 100, 1000, 10000, 100 000 and 1 000 000. Solve number and practical problems involving place value.

		Complete number patterns and make number stories. Count in multiples of twos, fives and tens to 100. Identify a number that is 1 more or 1 less than a 2-digit number. Identify and represent numbers using objects and pictorial representations, including using place value chart ot show numbers in tens and ones. Find how much more. Use the language of: equal to, more than, less than (fewer), most, least	different representations.	Solve number problems and practical problems.	Round numbers to the nearest 10, 100 or 1000 Estimate sum and difference using rounding		
Four Operations	Explore the composition of numbers to 10 (2, 3, 4, and 5 first) Automatically recall number bonds for numbers 0-5	read, write and interpret mathematical statements involving addition (+), subtraction (-)	Solve problems (including a 2 digit number and ones, a two digit number and tens and two two digit numbers)	Add and subtract numbers mentally (including a three-digit number and ones, a three-digit number and tens and a	Add and subtract 4 digit numbers without renaming using a formal written method.	Add whole numbers with more than 4 digits (using formal written methods).	Perform mental calculations (including mixed operations and larger numbers).

	and some to 10 Begin to have an understanding of doubles, up to double 5 Begin to have an understanding of odd and even numbers within 10.	and equals (=) signs represent and use number bonds and related subtraction facts within 20 solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems. Use a range of methods for addition (add by counting, add by counting on, add by making 10 and add by adding ones) to add one digit and two digit numbers to 20 including 0. Use a range of methods for subtraction (subtract by crossing out, subtract using number bonds, subtract by counting back, subtract by	with addition and subtraction (with and without renaming) using concrete objects and pictorial representations. Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. Apply an increasing knowledge of	three-digit number and hundreds). Add and subtract numbers without renaming using the formal written method. Add and subtract numbers with renaming using the formal written method. Solve word problems involving addition and subtraction. Estimate the answer to a calculation and use inverse operations to check answers Solve problems, including missing number problems, using number facts and place value. Recall and use 3, 4 and 8 timestable facts Divide a number by 3, 4 and 8.	Add and subtract 4 digit numbers with renaming using a formal written method. Add and subtract numbers mentally. Solve word problems involving addition and subtraction. Estimate and use inverse operations to check answers to a calculation Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. Multiply and divide by 6, 7, 9, 11 and 12 using multiplication table facts. Multiply and divide with and without regrouping.	Add numbers mentally with increasingly large numbers. Subtract whole numbers with more than 4 digits. Subtract numbers mentally with increasingly large numbers. Use rounding to check answers. Solve word problems involving addition, subtraction, multiplication and division, and a combination of these, deciding on the most appropriate method and operation and knowing why. Find multiples and common multiples. Find factors (including all factor pairs) and common factors.	Use estimation to check answers to calculations and determine an appropriate degree of accuracy. Use the order of operations to solve calculations involving the four operations. Solve multi-step problems involving addition and subtraction, multiplication and division by selecting the most appropriate method, knowing why. Multiply numbers up to 4 digits by a 2-digit whole number using long multiplication. Divide numbers up to 4 digits by a 2-digit whole number using an appropriate method. Interpret remainders in division (either as whole number

		subtracting ones and subtract by subtracting from 10) to subtract one digit and two digit numbers to 20 including 0. Make addition and subtraction stories. Make a family of addition and subtraction facts. Make equal groups. Add equal groups to find the total number of objects. Group things equally. Share things equally. Solve word problems about multiplication. solve one-step problems involving multiplication and division, by calculating the answer using	mental and written methods Recall and use the 2, 5 and 10 times table (both multiplication and division facts) Recognise odd and even numbers Calculate and write multiplication equations for the times table facts using the X, ÷ and = signs. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot Recall and write a family of multiplication and division facts. Solve word problems involving multiplication and division, using	Solve word problems involving the 3, 4 and 8 times tables. 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. 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.	Find the quotient and remainder in division. 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 Recognise and use factor pairs and commutativity in mental calculations Multiply two-digit and three-digit numbers by a one-digit number using formal written method 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	Identify prime numbers (up to 100), prime factors and composite numbers and be able to use the appropriate vocabulary. Recognise square numbers and cube numbers, and use the notation for squares and cubes. Multiply numbers up to 4 digits by a 1 or 2 digit number, using a formal written method (including long multiplication) Multiply numbers up to 3 digits by a 2-digit number. Multiply and divide mentally, drawing upon known facts. Multiply and divide numbers by 10, 100 and 1000. Divide 3-digit and 4-digit numbers	remainders, fractions, or by rounding, as appropriate) Identify common factors, common multiples and prime numbers.

		concrete objects, pictorial representations and arrays with the support of the teacher.	pictorial and concrete resources.		problems such as n objects are connected to m objects.	by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)	
Fractions	Begin to have an understanding of half and experience finding half of objects and quantities to 10.	Recognise, find, show and name a half (knowing it is one of two equal parts). . Recognise, find, show and name a quarter (knowing it is one of four equal parts). Group/share objects, shapes and quantities to get a half or a quarter.	Recognise, find, name and write fractions (1/3, ¼, 2/4, and ¾) of a length, shape, set of objects or quantity Name and write a simple fraction. Name fractions that make one whole. Compare and order fractions. Count wholes with halves, quarters and thirds.	Count up and down in tenths. Recognise, find and write fractions of a discrete set of objects (unit and non unit fractions) Recognise and use fractions as numbers Recognise and show, using diagrams, equivalent fractions with small denominators Add and subtract fractions with the	Count up and down hundredths. Write and show mixed numbers on a number line. Recognise and show equivalent fractions families (using diagrams). Add and subtract fractions with the same denominator. Solve word problems involving fractions to calculate quantities and fractions to divide quantities	Find, name and write equivalent fractions of a given fraction (including tenths and hundredths). Recognise mixed numbers and improper fractions and convert from one form to the other. Use these to write mathematical statements. Compare and order fractions whose denominators are all multiples of the same number	Find equivalent fractions using common multiples. Simplify fractions using common factors. Compare and order fractions (including fractions >1) Add and subtract fractions with different denominators and mixed numbers. Multiply proper fractions (giving the answer in its simplest form).

			Find part of a set and a quantity (e.g. ½ of 6 = 3). Recognise the equivalent of ½ and 2/4.	same denominator within one whole Compare and order unit fractions, and fractions with the same denominators	including where the answer is a whole number.	Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Multiply proper fractions and mixed numbers by whole numbers. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	Divide proper fractions by whole numbers. Relate division of whole numbers to fractions and decimals.
Decimals					Recognise and write tenths and their decimal equivalents. Recognise and write hundredths and their decimal equivalents. Compare numbers with the same number of decimal places (up to 2dp). Complete number patterns involving decimals.	Read and write decimals up to three decimal places. Compare and order decimals up to three decimal places. Read and write fractions as decimals. Add and subtract decimals. Round decimals with two decimal places to the	Relate division of whole numbers to fractions and decimals. Write and calculate fractions as decimals. Tell the place value of digits in a decimal number (up to three decimal places). Multiply and divide decimals with 1-digit and 2-digit whole numbers.

					Round decimals with one decimal place to the nearest whole number. Recognise and write decimal equivalents of 1/4, 1/2 and 3/4. Divide a 1 or 2 digit number by 10 and by 100. Solve simple measure and money problems involving decimals.	nearest whole number and to one decimal place. Solve problems involving decimals up to three decimal places.	Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places. Use written division methods in cases where the answer has up to two decimal places Solve problems which require answers to be rounded to specified degrees of accuracy
Percentages						Recognise the per cent symbol (%). Understand that percent related to 'number of parts per hundred' Find percentages of a given number. Interpret a percentage as a fraction of an amount (with denominator 100) and as a decimal	Calculate the percentage of a number and a quantity. Use percentage to describe changes. Use percentage to compare amounts. Solve problems involving the calculation of percentages and the use of percentages for comparison

						Solve problems which require knowing percentage and decimal equivalents (e.g., ¼, 1/5, ½) and fractions with a denominator of a multiple of 10 or 25.	
Measure (length, capacity & mass)	Compare, order and describe different lengths using words such as long(er/est) and short(er/est) Compare, order and describe mass using words such as light(er/est) and heavy(er/est)	Measure and record lengths and heights (in metres and centimetres). Compare, order and describe different lengths using appropriate language. Know when to use cm or m to measure length. How to measure and draw lines. Measure and record mass and weight of different objects. Compare, order and describe different masses and weights using the appropriate language.	Choose and use appropriate standard units to estimate and measure length/height to the nearest appropriate unit (m/cm). Compare and order lengths, using <, > ad = to record the results Choose and use appropriate standard units to estimate and measure to the nearest appropriate unit (K.g/g). Compare and order mass, using <, > ad = to record the results	Measure, compare, add and subtract different lengths and masses. Write length in kilometres (km), metres (m) and centimetres (cm). Convert length from m and cm to cm, cm to m and cm, km and m to m and m to km and m Write length in kilometres (km) and metres (m). Read the scales for mass in kilograms (kg) and grams (g). Solve word problems on length and mass.	Measure and estimate length. Convert between different units of length and mass.	Convert between measurements of metric measure. Understand and use approximate equivalences between metric units and common imperial units Solve problems involving measurements using the four operations.	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places Convert between miles and kilometres

			Know when to use cm or m to measure length and Kg or g to measure mass. Measure and draw lines to a given length Solve word problems on length and mass.				
Area and Perimeter				Measure the total length around a shape. Find the perimeter of figures using a square grid. Find the perimeter of figures in centimetres (cm) and metres (m). Find the perimeter of squares and rectangles	Measure and calculate the perimeter of a rectilinear figure in centimetres and metres Find the area of rectilinear shapes by counting squares	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares) Estimate the area of irregular shapes Use scale diagrams to find the perimeter and the area of a figure.	Recognise that shapes with the same areas can have different perimeters and vice versa Recognise when it is possible to use formulae for area and volume of shapes (rectangles, triangles and parallelograms) Calculate the area of rectangles parallelograms and triangles Use the area of rectangles to find the area of other types of polygons.

Volume	Compare, order and describe capacity using words such a full, empty and half full	Compare and describe volume and capacity. Use half and a quarter to describe volume. Measure and record volume and capacity.	Choose and use appropriate standard units to estimate and measure capacity to the nearest appropriate unit (ml/L). Compare and order volume / capacity, using <, > ad = to record the results Solve word problems on volume.	Measure volume in millilitres (ml) and litres (l). Measure capacity in ml and l. Write volume in ml and l. Write capacity in ml and l. Solve word problems on volume and capacity	Measure and estimate capacity volume. Convert units of volume.	Find and compare the volumes of solids Find and compare the capacity of rectangular boxes. Estimate volume and capacity. Convert units of volume. Solve word problems involving volume.	Find the volume of solids by counting unit cubes. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units. Solve problems involving volume.
Time	Have an understanding of time; Days of the week, months of the year, seasons Today, yesterday, tomorrow Morning, afternoon and night time	Tell the time to the hour and half past the hour. Draw the hands on a clock face to show these times. Measure and record time (hours, minutes and seconds) Sequence events in chronological order using appropriate language.	Tell and write the time to 5 minutes, including quarter past/to the hour. Draw hands on a clock face to show time. Find the duration of time. Find the ending or starting time. Compare and sequence intervals of time.	Tell and write time in a.m. and in p.m, with increasing accuracy to the nearest minute. Tell and write time using "past" and "to". Tell and write time shown on different types of clocks (including analogue, 12hr, 24hr and those using roman numerals).	Read and tell the time using the 24-hour clock. Convert time between analogue and digital 12- and 24-hour clocks. Change time in minutes to seconds. Change time in hours to minutes. Change time in years to months.	Convert measurements of time. Solve problems involving converting between units of time	

		Compare, order and describe time using the appropriate language. Recognise and use language relating to dates, including days of the week, weeks, months and years	Know the number of minutes in an hour. Know the number of hours in a day.	Measure time in seconds, hours and minutes. Find starting time, ending time and duration to compare events. Change minutes to seconds, and seconds to minutes. Find the number of days using a calendar. Know the number of days in each month, year and leap year. Use the appropriate vocabulary associated with time.	Change time in months to years. Find the duration, starting time and finishing time. Solve word problems on time.		
Money	Have an understanding of money through role play scenarios.	Recognise and know the value of different denominations of coins and notes	Name coins and notes. Recognise and use symbols for pounds (£) and pence (p). Count an amount of money.	Name the amount of money in pounds and pence. Use different ways to show the same amount of money. Add and subtract money in pounds and pence.	Count an amount of money and write it using decimals. Compare different amounts of money. Round money to the nearest £1 and to the nearest £10.	Use all four operations to solve problems involving using decimal notation, including scaling.	

			Show amounts of money in different ways. Combine amounts to make a particular value Exchange coins and notes. Compare amounts of money. Calculate change. Solve word problems on money of the same unit.	Calculate change in pounds and pence. Solve word problems on money, including giving change.	Estimate total amounts of money. Solve problems involving money.		
Ratio and Proportion							Compare the relative sizes of quantities and numbers using ratios, where missing values can be found by using integer multiplication and division facts Solve problems involving similar shapes where the scale factor is known or can be found Solve problems involving unequal sharing and

							grouping using knowledge of fractions and multiples.
Algebra							Describe and complete a linear pattern (number sequence). Write and evaluate algebraic expressions. Write and use simple formulae. Solve equations. Find pairs of numbers that satisfy an equation with two unknowns Enumerate possibilities of combinations of two variables.
Properties of Shape	Recognise and name common 2D and 3D shapes Begin to look for shapes within shapes Have an understanding of what happens when you combine different shapes	Recognise and name common 2-D and 3-D shapes Look for shapes in solids. Group shapes. Make and complete patterns with shapes.	Identify and describe the properties of 2-D shapes, including the number of sides, vertices and line symmetry in a vertical line Identify and describe the properties of 3-D shapes, including	Draw 2-D shapes and make 3-D shapes using modelling materials Recognise 3-D shapes in different orientations and describe them	Identify acute and obtuse angles. Compare and order angles up to two right angles by size Compare and classify triangles and quadrilaterals based on their	Identify, estimate and compare acute angles, right angles, obtuse angles and reflex angles. Draw and measure given angles. Identify angles on a whole turn, a	Recognise angles that meet at a point, angles on a straight line, and vertically opposite angles. Find unknown angles in triangles, quadrilaterals and regular polygons.

			the number of edges, vertices and faces Identify 2-D shapes on the surface of 3-D shapes Compare, group and sort common 2-D and 3-D shapes and everyday objects. Form different figures with shapes and make patterns. Draw figures on a square grid and a dot grid. Move and turn shapes. Recognise flat faces and curved surfaces. Fold two-dimensional shapes into three-dimensional ones.	Recognise an angle as a property of a shape or description of a turn Find angles in shapes. Find a right angle, an acute angle and an obtuse angle. Compare the sizes of angles, identifying where they are greater than or less than a right angle. Make a half turn, a three-quarters turn and a full turn and relate this to the number or right angles. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	properties and sizes Identify lines of symmetry in 2-D shapes presented in different orientations. Complete a simple symmetrical figure with respect to a specific line of symmetry.	straight line and angles that meet at a point. Find unknown lengths and angles in squares and rectangles, using their properties. Identify regular and irregular polygons, based on reasoning. Identify 3-D shapes from 2-D representations.	Compare and classify geometric shapes based on their properties and sizes Identify the radius, diameter, circumference and centre of a circle. Draw 2-D shapes using given dimensions and angles. Identify, describe and build 3D shapes (including nets).
Position and Movement	Be able to use the terms; in, on, under, behind, in front, next to to describe	Name positions in a race and in a queue, using appropriate language.	Order and arrange combinations of mathematical		Describe positions using coordinates (using the first quadrant).	Write the coordinates of points.	Use coordinate grids with negative numbers.

	the position of an object.	Describe movements and turns (including half, whole, quarter and three quarters)	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).		Plot points and draw sides to complete a given polygon Describe movement between positions as translations using up/down and left right	Identify, describe translations and reflections. Represent the position of a shape after translation or after reflection. To understand the shape has not changed during translation or reflection.	Describe positions of points with coordinates (on a full coordinate grid). Draw, translate and reflect simple shapes on the coordinate plane.
Graphs & Averages			Read and interpret information from pictograms, block diagrams, tally charts and tables. Construct pictograms, block diagrams, tally charts and tables. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity	Draw picture graphs, and bar graphs and tables Read and interpret bar graphs, pictograms and tables. Solve problems (one step and two step) using information from bar graphs, pictograms and tables	Use a table to show information. Draw, read and interpret discrete and continuous data using appropriate methods (tables, picture graphs, bar graphs and time graphs). Solve comparison, sum and difference problems using information from tables and graphs.	Read, complete and interpret information in a timetable. Read, interpret and complete information in a table. Read and interpret information from a line graph. Solve word problems (including comparison, sum and difference problems) using	Calculate and interpret the mean as an average. Interpret and construct pie charts. Interpret and construct line graphs Solve problems using information provided by graphs.

			Ask and answer questions about totalling and comparing categorical data.			information from a line graph.	
Negative Numbers					Count backwards through zero to include negative numbers	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.	Add and subtract negative numbers. Use negative numbers in context. Solve problems involving negative numbers. Calculate intervals across zero
Roman Numerals				Recognise and read Roman Numerals to interpret the time.	Read and write Roman numerals to 100 (I to C). Know that over time, the numeral system changed to include the concept of zero and place value.	Write Roman numerals up to 1000 (M). Recognise years written in Roman numerals.	
Pattern	Continue, copy and create repeating patterns (AB, ABB and ABBC patterns)						