A love of learning
A desire for God

Progression Map

Maths

Concept	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value: Counting		• I can count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • I can count, numbers to 100 in numerals; count in multiples of twos, fives and tens	• I can count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	• I can count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	• I can count in multiples of 6, 7, 9, 25 and 1000 • I can count backwards through zero to include negative numbers	• I can count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 • I can count forwards and backwards with positive and negative whole numbers, including through zero	
Place Value: Represent		• I can 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 • I can read and write numbers from 1 to 20 in numerals and words. • I can read and write numbers to 100 in numerals	• I can read and write numbers to at least 100 in numerals and in words • I can identify, represent and estimate numbers using different representations, including the number line	• I can identify, represent and estimate numbers using different representations • I can read and write numbers up to 1000 in numerals and in words	• I can identify, represent and estimate numbers using different representations • I can 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.	• I can read and write numbers to at least 1,000,000 and determine the value of each digit • I can read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	• I can read and write numbers up to 10,000,000 and determine the value of each digit

Place Value: Use Place Value and Compare		• I can when given a number, identify one more and one less	• I can recognise the place value of each digit in a two-digit number (tens, ones • I can compare and order numbers from 0 up to 100; use <, > and = signs	• I can recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • I can compare and order numbers up to 1000	• I can find 1000 more or less than a given number • I can recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • I can order and compare numbers beyond 1000	• I can order and compare numbers to at least 1,000,000 and determine the value of each digit	• I can order and compare numbers up to 10,000,000 and determine the value of each digit
Place Value: Problems and Rounding			• I can use place value and number facts to solve problems.	• I can solve number problems and practical problems involving these ideas.	• I can round any number to the nearest 10, 100 or 1000 • I can solve number and practical problems that involve all of the above and with increasingly large positive numbers	• I can interpret negative numbers in context • I can round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000 • I can solve number problems and practical problems that involve all of the above	• I can round any whole number to a required degree of accuracy • I can use negative numbers in context, and calculate intervals across zero • I can solve number and practical problems that involve all of the above.

Addition and Subtraction: Recall, Represent, Use		• I can read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • I can represent and use number bonds and related subtraction facts within 20	• I can recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • I can show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • I can recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	• I can estimate the answer to a calculation and use inverse operations to check answers	• I can estimate and use inverse operations to check answers to a calculation	• I can use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	
Addition and Subtraction: Calculations		• I can add and subtract one-digit and two-digit numbers to 20, including zero	• I can add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ➢ a two-digit number and ones ➢ a two-digit number and tens ➢ two two-digit numbers ➢ adding three one-digit numbers	• I can add and subtract numbers mentally, including: ➢ a three-digit number and ones ➢ a three-digit number and tens ➢ a three-digit number and hundreds • I can add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	• I can add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	• I can add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • I can add and subtract numbers mentally with increasingly large numbers	• I can perform mental calculations, including with mixed operations and large numbers • I can use my knowledge of the order of operations to carry out calculations involving the four operations

Addition and Subtraction: Solve Problems		• I can solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? – 9.	• I can solve problems with addition and subtraction: • I can using concrete objects and pictorial representations, including those involving numbers, quantities and measures • I can apply my increasing knowledge of mental and written methods	• I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	• I can solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	• I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. • I can solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	• I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Multiplication and Division: Recall, Represent, Use			• I can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • I can show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	• I can recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	• I can recall multiplication and division facts for multiplication tables up to 12 × 12 • I can 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 • I can recognise and use factor pairs and commutativity in mental calculations	• I can identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • I know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • I can establish whether a number up to 100 is prime and recall prime numbers up to 19 • I can recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}).	• I can identify common factors, common multiples and prime numbers • I can use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Multiplication and Division: Calculations			• I can calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	• I can 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	• I can multiply two-digit and three-digit numbers by a one-digit number using formal written layout	• I can 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 • I can multiply and divide numbers mentally drawing upon known facts • I can 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 • I can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	• I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • I can divide numbers up to 4 digits by a one-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • I can 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 • I can perform mental calculations, including with mixed operations and large numbers
Multiplication and Division: Solve problems		• I can 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.	• I can solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	• I can 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.	• I can 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.	• I can solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • I can solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	• I can solve problems involving addition, subtraction, multiplication and division

Multiplication and Division: Combined operations						• I can solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	• I can use my knowledge of the order of operations to carry out calculations involving the four operations
Fractions: Recognise and Write		• I can recognise, find and name a half as one of two equal parts of an object, shape or quantity • I can recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	• I can recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity	• I can 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 • I can recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • recognise and use I can fractions as numbers: unit fractions and non-unit fractions with small denominators	• I can count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	• I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • I can recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 and 1/5]	

Fractions: Compare			• I can recognise the equivalence of 2/4 and 1/2.	• I can recognise and show, using diagrams, equivalent fractions with small denominators • I can compare and order unit fractions, and fractions with the same denominators	• I can recognise and show, using diagrams, families of common equivalent fractions	• I can compare and order fractions whose denominators are all multiples of the same number	• I can use common factors to simplify fractions; use common multiples to express fractions in the same denomination • I can compare and order fractions, including fractions > 1
Fractions: Calculations			• I can write simple fractions for example, 1/2 of 6 = 3	• I can add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7]	• I can add and subtract fractions with the same denominator	• add and subtract fractions with the same denominator and denominators that are multiples of the same number • I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	• I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • I can multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1/4 × 1/2 = 1/8] • I can divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6]

Fractions: Solve problems				• I can solve problems that involve all of the above.	• I can 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.		
Decimals: Recognise and Write					• I can recognise and write decimal equivalents of any number of tenths or hundredths • I can recognise and write decimal equivalents to ¼, ½, ¾	• I can read and write decimal numbers as fractions [for example, 0.71 = 71/100] • I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	• I can identify the value of each digit in numbers given to three decimal places

Decimals: Compare					• I can round decimals with one decimal place to the nearest whole number • I can compare numbers with the same number of decimal places up to two decimal places	• I can round decimals with two decimal places to the nearest whole number and to one decimal place • I can read, write, order and compare numbers with up to three decimal places	
Decimals: Calculations and Problems					• I can 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	• I can solve problems involving number up to three decimal places	• I can multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • I can multiply one-digit numbers with up to two decimal places by whole numbers • I can use written division methods in cases where the answer has up to two decimal places • I can solve problems which require answers to be rounded to specified degrees of accuracy

Fractions, Decimals and Percentages					• I can solve simple measure and money problems involving fractions and decimals to two decimal places	• I can 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 • I can solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25.	• I can associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] • I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Ratio and Proportion							• I can solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts • I can solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison • I can solve problems involving similar shapes where the scale factor is known or can be found • I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples

Algebra							• I can use simple formulae • I can generate and describe linear number sequences • I can express missing number problems algebraically • I can find pairs of numbers that satisfy an equation with two unknowns • I can enumerate possibilities of combinations of two variables.
Measurement: Using Measures		• I can compare, describe and solve practical problems for: ➢ 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, quicker, slower, earlier, later] • I can measure and begin to record the following: ➢ lengths and heights ➢ mass/weight ➢ capacity and volume ➢ time (hours, minutes, seconds)	• I can choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels • I can compare and order lengths, mass, volume/capacity and record the results using >, < and =	• I can measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	• I can convert between different units of measure [for example, kilometre to metre; hour to minute] • I can estimate, compare and calculate different measures	• I can convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • I can understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • I can use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.	• I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate • I can 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 • I can convert between miles and kilometres

Measurement: Money		• I can recognise and know the value of different denominations of coins and notes	• I can recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • I can find different combinations of coins that equal the same amounts of money • I can solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	• I can add and subtract amounts of money to give change, using both £ and p in practical contexts	• I can estimate, compare and calculate different measures, including money in pounds and pence	• I can use all four operations to solve problems involving measure [for example, money] using decimal notation, including scaling.	
Measurement: Time		• I can sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] • I can recognise and use language relating to dates, including days of the week, weeks, months and years • I can tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	• I can compare and sequence intervals of time • I can tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times • I know the number of minutes in an hour and the number of hours in a day.	• I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • I can estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight • I know the number of seconds in a minute and the number of days in each month, year and leap year • I can compare durations of events [for example to calculate the time taken by particular events or tasks].	• I can read, write and convert time between analogue and digital 12- and 24-hour clocks • I can solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	• I can solve problems involving converting between units of time	• I can 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

Measurement: Perimeter, Area, Volume				• I can measure the perimeter of simple 2-D shapes	• I can measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • I can find the area of rectilinear shapes by counting squares	• I can measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • I can calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes • I can estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	• I can recognise that shapes with the same areas can have different perimeters and vice versa • I can recognise when it is possible to use formulae for area and volume of shapes • I can calculate the area of parallelograms and triangles • I can calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3].
Geometry: 2-D shapes		• I can recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles]	• I can identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • I can identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid] • I can compare and sort common 2-D shapes and everyday objects.	• I can draw 2-D shapes	• I can compare and classify geometric shapes, including quadrilaterals and triangles**,** based on their properties and sizes • I can identify lines of symmetry in 2-D shapes presented in different orientations	• I can use the properties of rectangles to deduce related facts and find missing lengths and angles • I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	• I can draw 2-D shapes using given dimensions and angles • I can compare and classify geometric shapes based on their properties and sizes • I can illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

Geometry: 3-D shapes		• I can recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].	• I can identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • I can compare and sort common 3-D shapes and everyday objects.	• I can make 3-D shapes using modelling materials; • I can recognise 3-D shapes in different orientations and describe them		• I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations	• I can recognise, describe and build simple 3-D shapes, including making nets
Geometry: Angles and Lines				• I can recognise angles as a property of shape or a description of a turn • I can identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	• I can identify acute and obtuse angles and compare and order angles up to two right angles by size • I can identify lines of symmetry in 2-D shapes presented in different orientations • I can complete a simple symmetric figure with respect to a specific line of symmetry.	• I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles • I can draw given angles, and measure them in degrees (°) • I can identify: ➢ angles at a point and one whole turn (total 360°) ➢ angles at a point on a straight line and 1/2 a turn (total 180°) ➢ other multiples of 90°	• I can find unknown angles in any triangles, quadrilaterals, and regular polygons • I can recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Geometry: Position and Direction		• I can describe position, direction and movement, including whole, half, quarter and three-quarter turns.	• I can order and arrange combinations of mathematical objects in patterns and sequences • I can 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).		• I can describe positions on a 2-D grid as coordinates in the first quadrant • I can describe movements between positions as translations of a given unit to the left/right and up/down • I can plot specified points and draw sides to complete a given polygon.	• I can 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.	• I can describe positions on the full coordinate grid (all four quadrants) • I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
Statistics: Present and Interpret			• I can interpret and construct simple pictograms, tally charts, block diagrams and simple tables	• I can interpret and present data using bar charts, pictograms and tables	• I can interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.	• I can complete, read and interpret information in tables, including timetables.	• I can interpret and construct pie charts and line graphs and use these to solve problems

Statistics: Solve Problems			• I can ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • I can ask and answer questions about totalling and comparing categorical data.	• I can 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.	• I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	• I can solve comparison, sum and difference problems using information presented in a line graph	• I can calculate and interpret the mean as an average.