Y1 - Maths Long Term Plan - 2015 - 2016

Number and Place Value	Calculation Addition and Subtraction	Calculation Multiplication and Division	Fractions	Measurement	Geometry
Count to and across 100, forwards and backwards or from any given number

Count, read and write numbers to 100 in numerals

Count in multiples of 1, 2, 5, 10 (make connection to arrays)

Identify 1 more/less than any number up to 20

Identify and represent numbers concretely and pictorially

Use the language of equal to, more than, less than, most, least

Read and write numbers from 1-20 in digits and words | Use the language of addition and subtraction

Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs

Represent and use number bonds and related subtraction facts within 20

Add and subtract one digit and two-digit numbers to 20, including zero

Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number 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 | Recognise, find and name a half as one of two equal parts of an object, shape or quantity

Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity | Compare, describe and solve practical problems for: lengths and heights' mass/weight' capacity and volume and time

Measure and begin to record the following: lengths and heights, mass/weight, capacity and volume, time (hours, minutes, seconds)

Recognise and know the value of different denominations of coins and notes

Sequence events in chronological order using simple language

Recognise and use language relating to dates, including days of the week, weeks, months and years

Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times | Recognise and name common 2-D and 3-D shapes, including:
2-D shapes [for example, rectangles (including squares), circles and triangles]
3-D shapes [for example, cuboids (including cubes), pyramids and spheres]

Describe position, direction and movement, including whole, half, quarter and three-quarter turns |

Y2 - Maths Long Term Plan - 2015 - 2016

Number and Place Value	Calculation Addition and Subtraction	Calculation Multiplication and Division	Fractions	Measurement	Geometry	Statistics
Count in steps of 2, 3, 5 and 10 from any number(forward and backward	Solve problems using concrete objects and pictorial representations, including those involving numbers, quantities and measures	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Recognise, find, name and write fractions1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity	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)	Identify and describe the properties of 2-D shapes	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables
Count in 10's forwards and backwards from any number	Solve problems applying their increasing knowledge of mental and written methods	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	Write simple fractions for example,1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2	Compare and order lengths, mass, volume/capacity using >, < and =	Identify and describe the properties of 3-D shapes	Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
Identify, represent and estimate numbers using different representations e.g. the number line (up to 100)	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100			Recognise and use symbols for pounds (£) and pence (p) and combine amounts to make a particular value	Identify 2-D shapes on the surface of 3-D shapes	Ask and answer questions about totalling and comparing categorical data
Read and write numbers to at least 100 in numerals and words	Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot	Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot		Find different combinations of coins that equal the same amounts of money	Compare and sort common 2-D and 3-D shapes and everyday objects	
Compare and order numbers from 0 up to 100 and use the > < and = signs	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts		Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	Order and arrange combinations of mathematical objects in patterns and sequences	
Recognise the place value of each digit in a 2 digit number				Compare and sequence intervals of time	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)	
				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		
				Know the number of minutes in an hour and the number of hours in a day		

Y3 - Maths Long Term Plan - 2015 - 2016

Number and Place Value	Calculation Addition and Subtraction	Calculation Multiplication and Division	Fractions	Measurement	Geometry	Statistics
Count in multiples of 4, 8, 50 and 100

Find 10 or 100 more or less than a given number

Recognise the place value of each digit in a three-digit number and compare and order numbers up to 1000

identify, represent and estimate numbers using different representations

read and write numbers up to 1000 in numerals and in words

solve number problems and practical problems involving numbers up to 1000 | Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds

Add and subtract numbers with up to three digits, using formal written methods of columnar 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, place value, and more complex addition and subtraction | Recall and use multiplication and division facts for the 3, 4 and 8 multiplication 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. | Recognise that tenths arise from dividing an object into 10 equal parts or dividing one-digit numbers by 10

Count up and down in tenths

Recognise, find and write fractions (with small denominators) of a discrete set of objects

Recognise and use fractions (with small denominators) as numbers

Recognise and show, using diagrams, equivalent fractions with small denominators

Add and subtract fractions with the same denominator within one whole

Compare and order unit fractions, and fractions with the same denominators

solve problems that involve all of the above | Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

Measure the perimeter of simple 2-D shapes

Add and subtract amounts of money to give change, using both £ and p in practical contexts

Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12/24-hour clocks

Estimate and read time with increasing accuracy to the nearest minute

Record and compare time in terms of seconds, minutes and hours using a.m./p.m., morning, afternoon, noon, midnight

Know the number of seconds in a minute and the number of days in each month, year and leap year

Compare durations of events | Draw 2-D shapes and make 3-D shapes using modelling materials

Recognise 3-D shapes in different orientations and describe them

Recognise angles as a property of shape or a description of a turn

Identify right angles and 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

Identify horizontal and vertical lines and pairs of perpendicular and parallel lines | Interpret and present data using bar charts, pictograms and tables

Solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables |

Y4 - Maths Long Term Plan - 2015 - 2016

Number and Place Value	Calculation Addition and Subtraction	Calculation Multiplication and Division	Fractions	Measurement	Geometry	Statistics
Count in multiples of 6, 7, 9, 25 and 1000

Find 1000 more or less than a number

Count backwards through zero to include negative numbers

Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)

Order and compare numbers beyond 1000

identify, represent and estimate numbers using different representations

Round any number to the nearest 10, 100 or 1000

Solve number and practical problems

Read Roman numerals to 100 (I to C) | Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate

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 | Recall multiplication and division facts for multiplication tables up to 12 × 12

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 layout

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 | Recognise and show, using diagrams, families of common equivalent fractions

Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten

Count up and down in hundredths

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

Add and subtract fractions with the same denominator

Recognise and write decimal equivalents of any number of tenths or hundredths and of 1/4 , 1/2 , 3/4

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

Round decimals with one decimal place to the nearest whole number

Compare numbers with the same number of decimal places up to two decimal places

Solve simple measure and money problems involving fractions and decimals to two decimal places | Convert between different units of measure [for example, kilometre to metre; hour to minute]

Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres

Find the area of rectilinear shapes by counting squares

Estimate, compare and calculate different measures, including money in pounds and pence

Read, write and convert time between analogue and digital 12- and 24-hour clocks

Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days. | Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes

Identify acute and obtuse angles and compare and order angles up to two right angles by size

Identify lines of symmetry in 2-D shapes presented in different orientations

Complete a simple symmetric figure with respect to a specific line of symmetry

Describe positions on a 2-D 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 | Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs

Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs |

Y5 - Maths Long Term Plan - 2015 - 2016

Number and Place Value	Calculation Addition and Subtraction	Calculation Multiplication and Division	Fractions	Measurement	Geometry	Statistics
Read, write, order and compare numbers to at least 1 000 000 and know the value of each digit Count forwards or backwards in steps 10, 100, 1 000, 10 000, 100 000 and 1 000 000 Interpret negative numbers and count forwards and backwards with positive and negative whole numbers Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 Solve number problems and practical problem Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Add and subtract numbers mentally with increasingly large numbers Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers Establish whether a number up to 100 is prime and recall prime numbers up to 19 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 Multiply and divide numbers mentally drawing upon known facts 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 Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Recognise and use square numbers and cube numbers, and the notation for squared and cubed Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	Compare and order fractions whose denominators are all multiples of the same number Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed 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, supported by materials and diagrams Read and write decimal numbers as fractions, recognising and using thousandths and relate them to tenths, hundredths and decimal equivalents Round decimals with two decimal places to the nearest whole number and to one decimal place Read, write, order and compare numbers with up to three decimal places solve problems involving number up to three decimal places 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 Solve problems which require knowing percentage and decimal equivalents and those fractions with a denominator of a multiple of 10 or 25	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares), and including using standard units, and estimate the area of irregular shapes Estimate volume and capacity Solve problems involving converting between units of time use all four operations to solve problems involving measure using decimal notation, including scaling	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees (°) 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°) and other multiples of 90° Use the properties of rectangles to deduce related facts and find missing lengths and angles Distinguish between regular and irregular polygons based on reasoning about equal sides and angles 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	Solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables

Y6 - Maths Long Term Plan - 2015 - 2016

Number, Place Value and Algebra	Calculation	Fractions	Ratio and Proportion	Measurement	Geometry	Statistics
Read, write, order and compare numbers up to 10 000 000 and know the value of each digit	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	Use common factors to simplify fractions	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	Draw 2-D shapes using given dimensions and angles	Interpret and construct pie charts and line graphs and use these to solve problems
Round any whole number to a required degree of accuracy	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	Use common multiples to express fractions in the same denomination		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	Recognise, describe and build simple 3-D shapes, including making nets	Calculate and interpret the mean as an average
Use negative numbers in context, and calculate intervals across zero		Compare and order fractions, including fractions > 1	Solve problems involving the calculation of percentages and the use of percentages for comparison		Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	
Solve number and practical problems that involve all of the above	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 Perform mental calculations, including with mixed operations and large numbers	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions		Convert between miles and kilometres		
Use simple formulae		Multiply simple pairs of proper fractions, writing the answer in its simplest form	Solve problems involving similar shapes where the scale factor is known or can be found		Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	
Generate and describe linear number sequences	Identify common factors, common multiples and prime numbers	Divide proper fractions by whole numbers		Recognise that shapes with the same areas can have different perimeters and vice versa		
Express missing number problems algebraically	Use their knowledge of the order of operations to carry out calculations involving the four operations	Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction		Recognise when it is possible to use formulae for area and volume of shapes	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	
Find pairs of numbers that satisfy an equation with two unknowns	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	Calculate the area of parallelograms and triangles	Describe positions on the full coordinate grid (all four quadrants)	
Enumerate possibilities of combinations of two variables.	Solve problems involving addition, subtraction, multiplication and division	Multiply one-digit numbers with up to two decimal places by whole numbers		Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres and extending to other units	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes	
	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	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				
		Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts				