Maths Termly Expectations Cycle A 2022/23 Y3 missing Term 4

Year Group	Autumn	Spring	Summer
Year R	**Term 1** Matching and sorting Comparing amounts Compare size, mass and capacity Exploring pattern Representing 1, 2 and 3 Comparing 1, 2 and 3 Composition of 1, 2 and 3	**Term3** Introducing zero Comparing numbers to 5 Composition of 4 and 5 Comparing Mass Comparing Capacity Introducing 6,7 and 8 Combining two amounts Making pairs Length and height	**Term 5** To 20 and beyond Build numbers beyond 10 Count patterns beyond 10 Spatial reasoning Match, rotate and manipulate Adding more Taking aware
	Term 2 Circles and triangles Positional language Representing numbers to 5 One more of less Shapes with 4 sides Time	**Term 4** Counting to 9 and 10 Comparing numbers to 10 Bonds to 10 3D Shapes Spatial awareness Patterns	**Term 6** Spatial reasoning Compose and decompose Doubling and sharing Even and odd Spatial reasoning Visualise and build Patterns and relationships Mapping
	Autumn	Spring	Summer
1	**Term 1** **Place value** • Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number • 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 • 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	**Term 3** **Compare lengths and heights** • Compare, describe and solve practical problems for: lengths and height; mass/weight; capacity and volume; time • Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume; time **Multiplication and Division** • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	**Term 5** Details of new materials forthcoming

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	• • Compare numbers using and = signs • Read and write numbers from 1 to 20 in numerals and words **Place Value within 20** • 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 • Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s • Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number • Read and write numbers from 1 to 20 in numerals and words • Given a number, identify 1 more and 1 less	• Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	
	Term 2 **Addition and Subtraction** • 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) • 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 1-digit and 2-digit numbers to 20, including zero **Shape** Recognise and name common 2-D and 3-D shapes, including: 2-D shapes [for example, rectangles (including squares), circles and	**Term 4** **Multiplication and Division** • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers **Place Value within 50** • Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number • Identify and represent numbers using objects and pictorial representations including the	**Term 6** Details of Summer due March 23

	triangles]; 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	number line, and use the language of: equal to, more than, less than (fewer), most, least • Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s • Given a number, identify 1 more and 1 less **Mass and Volume** • Compare, describe and solve practical problems for: lengths and heights; mass/weight; capacity and volume; time • Measure and begin to record the following: lengths and heights; mass/weights; capacity and volume; time	

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2	**Term 1** **Place Value** • Read and write numbers from 1 to 20 in numerals and words (Y1) • Read and write numbers to at least 100 in numerals and in words • Identify, represent and estimate numbers using different representations, including the number line • Count in steps of 2, 3 and 5 from 0, and in 10s from any number, forward and backward • Recognise the place value of each digit in a 2-digit number (tens, ones) • Compare and order numbers from 0 up to 100; use and = signs • Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number • 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 •	**Term 3** **Length and Height** • 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 • Compare and order lengths, mass, volume/capacity and record the results using >, < and = • Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts **Multiplication and Division** • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	**Term** 5 Details of new materials forthcoming

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	Term 2 **Addition and Subtraction** • Represent and use number bonds and related subtraction facts within 20 (Y1) • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a 2-digit number and 1s, a 2-digit number and 10s, two 2-digit numbers and adding three 1-digit numbers • Compare and order numbers from 0 up to 100; use and = signs **Shape** • Identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line • Compare and sort common 2-D and 3-D shapes and everyday objects • Identify 2-D shapes on the surface of 3-D shapes Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces	**Term 4** **Multiplication and Division** • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers **Money** • Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change **Mass, Capacity and Temperature** • 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 • Compare and order lengths, mass, volume/capacity and record the results using >, < and =	**Term** 6 Details of Summer due March 23

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Year Group	Autumn	Spring	Summer
3	**Term 1** **Place Value** • 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 • Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number • Compare numbers using and = signs • Read and write numbers from 1 to 20 in numerals and words	**Term3** **Multiplication and division B** • Recall and use multiplication facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers (Y2) • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-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 **Length and perimeter** • Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • Measure the perimeter of simple 2-D shapes	Term 5 Details of Summer due March 23
	Term 2 **Addition and subtraction [within 10]** • 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) • Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • Represent and use number bonds and related subtraction facts within 20	Term 4 **Fractions** • Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • Compare and order unit fractions, and fractions with the same denominators • Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) **Mass and capacity**	Term 6 Details of Summer due March 23

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	• Add and subtract 1-digit and 2-digit numbers to 20, including zero **Multiplication and division A** • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods • Show that multiplication of two numbers can be done in any order (commutative) and division on one number by another cannot (Y2) • Count in steps of 2, 3 and 5 from 0, and in 10s from any number, forward and backward (Y2) • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers (Y2) • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables **Area** • Find the area of rectilinear shapes by counting squares	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	

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Year Group	Autumn	Spring	Summer
4	**Term 1** **Place value** • Read and write numbers up to 1,000 in numerals and words (Y3) • Identify, represent and estimate numbers using different representations • Recognise the place value of each digit in a 3-digit number (hundreds, tens, ones) (Y3) • Count in multiples of 6, 7, 9, 25 and 1,000 • Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens and ones) • Find 1,000 more or less than a given number • Order and compare numbers beyond 1,000 • 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 • Round any number to the nearest 10, 100 or 1,000 **Addition and subtraction** • Add and subtract numbers with up to four digits using the formal written methods of columnar addition and subtraction where appropriate • Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why • Estimate and use inverse operations to check answers to a calculation	**Term3** **Multiplication and division B** • Recognise and use factor pairs and commutativity in mental calculations • Recall multiplication and division facts for multiplication tables up to 12 × 12 • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 (Y5) • Solve problems involving multiplying and adding, including using the distributive law to multiply 2-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects • Multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout • 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	**Term 5** Details of Summer due March 23
	Term 2 **Area** • Find the area of rectilinear shapes by counting squares **Multiplication and division A**	**Term 4** **Fractions** • Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators (Y3)	**Term 6** Details of Summer due March 23

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	• Recall multiplication and division facts for multiplication tables up to 12 × 12 • Recognise and use factor pairs and commutativity in mental calculations • Recognise and use factor pairs and commutativity in mental calculations • Count in multiples of 6, 7, 9, 25 and 1,000 • 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	• Add and subtract fractions with the same denominator **Decimals** • Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10 (Y3) • Recognise and write decimal equivalents of any number of tenths or hundredths • Compare numbers with the same number of decimal places up to 2 decimal places • Find the effect of dividing a 1- or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths • Recognise and show, using diagrams, families of common equivalent fractions	

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Year Group	Autumn	Spring	Summer
5	**Term 1** **Place value** • Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals • Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 • Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit • Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 • Solve number problems and practical problems involving the above **Addition and subtraction** • Add and subtract numbers mentally with increasingly large numbers • Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction) • Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 • 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	**Term3** **Ratio (Y6 objectives)** • 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 unequal sharing and grouping using knowledge of fractions and multiples • Solve problems involving similar shapes where the scale factor is known or can be found **Fractions B** • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • 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 (Y4)	**Term 5** Details of Summer due March 23
	Term 2 **Multiplication and division A and B**	**Term 4** **Decimals and percentages**	**Term 6** Details of Summer due March 23

	• 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 (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 cube numbers, and the notation for squared (2) and cubed (3) • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 • Multiply and divide numbers mentally, drawing upon known facts • Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes **Fractions A** • 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 • Compare and order fractions whose denominators are all multiples of the same number • Add and subtract fractions with the same denominator, and denominators that are multiples of the same number	• Read, write, order and compare numbers with up to 3 decimal places • Read and write decimal numbers as fractions • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • 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 • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place • Recognise the per cent symbol (%) and understand that per cent relates to “number of parts per 100”, and write percentages as a fraction with denominator 100, and as a decimal fraction • Solve problems involving numbers up to 3 decimal places 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 Perimeter and area • Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm2) and square metres (m2), and estimate the area of irregular shapes	

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		Statistics • Solve comparison, sum and difference problems using information presented in a line graph • Complete, read and interpret information in tables, including timetables **Algebra (Y6 objectives)** • Use simple formulae • Generate and describe linear number sequences • Find pairs of numbers that satisfy an equation with two unknowns • Enumerate possibilities of combinations of two variables • Express missing number problems algebraically • Find pairs of numbers that satisfy an equation with two unknowns • Enumerate possibilities of combinations of two variables	

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Year Group	Autumn	Spring	Summer
6	**Term 1** **Place value** • Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit • 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 the above **Four operations** • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy • Identify common factors, common multiples and prime numbers • Multiply multi-digit numbers up to four digits by a 2-digit whole number using the formal written method of long multiplication • Perform mental calculations, including with mixed operations and large numbers • Divide numbers up to four digits by a 2-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	**Term3** **Ratio** • 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 unequal sharing and grouping using knowledge of fractions and multiples • Solve problems involving similar shapes where the scale factor is known or can be found **Fractions B** • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams (Y5) • Divide proper fractions by whole numbers • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions• Associate a fraction with division and calculate decimal fraction equivalents • Solve problems involving addition, subtraction, multiplication and division **Decimals** • Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places • Solve problems which require answers to be rounded to specified degrees of accuracy	**Term 5** Details of Summer due March 23

	• Solve problems involving addition, subtraction, multiplication and division	• Multiply 1-digit numbers with up to 2 decimal places by whole numbers •Use written division methods in cases where the answer has up to 2 decimal places • Solve problems involving addition, subtraction, multiplication and division	
	Term 2 **Fractions A** • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Compare and order fractions, including fractions > 1 • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • Identify common factors, common multiples and prime numbers • 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 **Converting units** • 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 3 decimal places • Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate	**Term 4** **Fractions, decimals and percentages** • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • Compare and order fractions, including fractions >1 • Solve problems involving the calculation of percentages and the use of percentages for comparison **Area, perimeter and volume** • 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 • Calculate the area of parallelograms and triangles • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units **Statistics**	**Term 6** Details of Summer due March 23

		• Interpret and construct pie charts and line graphs and use these to solve problems • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs (Year 4) • Interpret and construct pie charts and line graphs and use these to solve problems • Calculate and interpret the mean as an average **Algebra** • Use simple formulae • Generate and describe linear number sequences • Find pairs of numbers that satisfy an equation with two unknowns • Enumerate possibilities of combinations of two variables • Express missing number problems algebraically • Find pairs of numbers that satisfy an equation with two unknowns • Enumerate possibilities of combinations of two variables	