YEAR 3	16 All of 15 and..	17 All of 16 and…	18 All of 16, 17 and…
Mastery Is fluent in the skill Can use in varied situations Can apply in problems Can explain reasoning in written or verbal form **Greater depth #3** Can use in a wide range of deep and complex problems and situations. Makes links between other concepts Calculates in the most efficient way Explains reasoning in a detailed mathematical way. **Exceptional achievement** #4 Working on the same aspect of maths at the level of the next, or higher year group	**Place value** • Count from 0 in multiples of 4, 8, 50 and 100 • Count up and down in tenths • Read and write numbers up to 1000 in numerals and in words • Read and write numbers with one decimal place • Identify, represent and estimate numbers using different representations (including the number line) • Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • Identify the value of each digit to one decimal place • Partition numbers in different ways (e.g. 146 = 100+ 40+6 and 146 = 130+16) • Compare and order numbers up to 1000 • Compare and order numbers with one decimal place • Find 1, 10 or 100 more or less than a given number • Round numbers to at least 1000 to the nearest 10 or 100 • Find the effect of multiplying a one- or two-digit number by 10 and 100, identify the value of the digits in the answer • Describe and extend number sequences involving counting on or back in different steps • Read Roman numerals from I to XII **Addition and subtraction** • Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) • Understand and use take away and difference for subtraction, deciding on the most efficient method for the numbers involved, irrespective of context • Recall/use addition/subtraction facts for 100 (multiples of 5 and 10) • Derive and use addition and subtraction facts for 100 • Derive and use addition and subtraction facts for multiples of 100 totalling 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*** • ***Solve number problems and practical problems involving these ideas*** •	**Multiplication and division** • Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) • Understand that division is the inverse of multiplication and vice versa • Understand how multiplication and division statements can be represented using arrays • Understand division as sharing and grouping and use each appropriately • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • Derive and use doubles of all numbers to 100 and corresponding halves • Derive and use doubles of all multiples of 50 to 500 • 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 • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy • ***Solve problems, including missing number problems, involving multiplication and division (and interpreting remainders), including positive integer scaling problems and correspondence problems in which n objects are connected to m objects*** **Fractions** • *Understand that finding a fraction of an amount relates to division* • *Show practically or pictorially that a fraction is one whole number divided by another (e.g. $\frac{3}{4}$ can be interpreted as 3 ÷ 4)* • Recognise that tenths arise from dividing objects into 10 equal parts and in dividing one-digit numbers or quantities by 10 • Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • Recognise and show, using diagrams, equivalent fractions with small denominators • Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$] • Compare and order unit fractions, and fractions with the same denominators *(including on a number line)* • *Count on and back in steps of $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{3}$* • ***Solve problems that involve all of the above***	**Measures** • Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • *Continue to estimate and measure temperature to the nearest degree (°C) using thermometers* • Measure the perimeter of simple 2-D shapes **Time** • Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • Estimate/read time with increasing accuracy to the nearest minute • Record/compare time in terms of seconds, minutes, hours; use vocabulary such as o'clock, 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 [for example to calculate the time taken by particular events or tasks] **Money** • *Continue to recognise and use the symbols for pounds (£) and pence (p) and understand that the decimal point separates pounds/pence* • *Recognise that ten 10p coins equal £1 and that each coin is $\frac{1}{10}$ of £1* • Add and subtract amounts of money to give change, using both £ and p in practical contexts • ***Solve problems involving money and measures and simple problems involving passage of time*** **Statistics** • *Use sorting diagrams including a Caroll diagram to compare and sort objects, numbers and common 2-D and 3-D shapes and everyday objects* • Interpret and present data using bar charts, pictograms and tables. • 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 **Geometry- Shape** • 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 whether angles are greater than or less than a right angle • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines • Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; • Describe positions on a square grid labelled with letters and numbers

YEAR 4	19 All of 18 and..	20 All of 19 and…	21 All of 19, 20 and…
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Makes links between other concepts Calculates in the most efficient way Explains reasoning in a detailed mathematical way. **Exceptional achievement** #4 Working on the same aspect of maths at the level of the next, or higher year group	**Place value** • Count in multiples of 6, 7, 9, 25 and 1000 • Count backwards through zero to include negative numbers • Count up and down in hundredths • *Read and write numbers to at least 10 000* • *Read and write numbers with up to two decimal places* • Recognise the place value of each digit in a four-digit number • *Identify the value of each digit to two decimal places* • *Partition numbers in different ways (e.g. 2.3 = 2+0.3 & 1+1.3)* • Identify, represent and estimate numbers using different representations *(including the number line)* • Order and compare numbers beyond 1000 • *Order and* compare numbers with the same number of decimal places up to two decimal places • Find *0.1, 1, 10, 100 or* 1000 more or less than a given number • Round any number to the nearest 10, 100 or 1000 • Round decimals (one decimal place) to the nearest whole number • Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer • *Describe and extend number sequences involving counting on or back in different steps, including sequences with multiplication and division steps* • Read Roman numerals to 100 and know that over time, the numeral system changed to include the concept of zero and place value • Solve number and practical problems that involve all of the above and with increasingly large positive numbers • *Write amounts of money using decimal notation* • *Recognise that one hundred 1p coins equal £1 and that each coin is* $\frac{1}{100}$ *of £1* • Estimate, compare and calculate different measures, including money in pounds and pence • *Order temperatures including those below 0°C* • Convert between different units of measure [e.g. kilometre to metre; hour to minute] **Addition and subtraction** • Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) • Select a mental strategy appropriate for the numbers involved in the calculation • Recall and use addition and subtraction facts for 100 • Recall and use +/- facts for multiples of 100 totalling 1000 • Derive and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place) • Add and subtract mentally combinations of two and three digit numbers and decimals to one decimal place • Add and subtract numbers with up to 4 digits and decimals with one decimal place using the formal written methods of columnar addition and subtraction where appropriate • Estimate; 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. • ***Solve addition and subtraction problems involving missing numbers*** •	**Multiplication and division** • *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)* • 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 (^{2}) and cube (^{3}) numbers, and notation • *Use partitioning to double or halve any number, including decimals to two decimal places* • 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 • 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 • 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 • ***Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy*** ***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*** **Fractions** • Recognise mixed numbers and improper fractions and convert from one form to the other • Read and write decimal numbers as fractions (e.g. 0.71 = $\frac{71}{100}$) • *Count on and back in mixed number steps such as* $1\frac{1}{2}$ • Compare and order fractions whose denominators are all multiples of the same number *(including on a number line)* • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • Add and subtract fractions with denominators that are the same and that are multiples of the same number *(using diagrams)* • Write statements > 1 as a mixed number (e.g. $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$) • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • 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 of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and fractions with a denominator of a multiple of 10 or 25	**Money and measures** • *Recognise that one hundred 1p coins equal £1 and that each coin is* $\frac{1}{100}$ *of £1* • Estimate, compare and calculate different measures, including money in pounds and pence • *Order temperatures including those below 0°C* **Statistics** • Use a variety of sorting diagrams to compare and classify numbers and geometric shapes based on their properties and sizes • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts, time graphs ie. At what time was the bath full. • ***Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs*** **Area and perimeter** • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • *Know area is a measure of surface within a given boundary* • Find the area of rectilinear shapes by counting squares **Angles, position and direction** • Describe positions on a 2-D grid as coordinates in the first quadrant • Plot specified points and draw sides to complete a given polygon (when given coordinates) • Describe movements between positions as translations of a given unit to the left/right and up/down • ***Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days and problems involving money and measures*** **Geometry- Shape & Symmetry** • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • 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 • *Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines* • Identify acute and obtuse angles and compare and order angles up to 180 by size **Decimals** • *Identify the value of each digit to two decimal places* • *Partition numbers in different ways (e.g. 2.3 = 2+0.3 & 1+1.3)* • *Read and write numbers with up to two decimal places* *Order and* compare numbers with the same number of decimal places up to two decimal places • **Time** • Convert between different units of measure [e.g. kilometre to metre; hour to minute] • 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***

YEAR 5	22 All of 21 and..	23 All of 22 and…	24 All of 22, 23 and…
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Makes links between other concepts Calculates in the most efficient way Explains reasoning in a detailed mathematical way. **Exceptional achievement** #4 Working on the same aspect of maths at the level of the next, or higher year group	**Place value** • 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 • *Identify represent and estimate numbers using the number line* • *Find 0.01, 0.1, 1, 10, 100, 100 and other powers of 10 more or less than a given number* • Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • Multiply/divide whole numbers and decimals by 10, 100 and 1000 • Interpret negative numbers in context, count on and back with positive and negative whole numbers, including through zero • *Describe and extend number sequences including those with multiplication/division steps and where the step size is a decimal* • Read Roman numerals to 1000 (M); recognise years written as such **Addition and subtraction** • Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) • Select a mental strategy appropriate for the numbers involved in the calculation • Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place) • Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places) • Add and subtract numbers mentally with increasingly large numbers and decimals to two decimal places • Add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction) • 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*** • ***Solve addition and subtraction problems involving missing numbers*** **Decimals** • Read and write decimal numbers as fractions (e.g. 0.71 = $\frac{71}{100}$) • Round decimals with two decimal places to the nearest whole number and to one decimal place • Count forwards and backwards in decimal steps • Read, write, order and compare numbers with up to 3 decimal places • Identify the value of each digit to three decimal places	**Multiplication and division** • *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)* • 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 (^{2}) and cube (^{3}) numbers, and notation • *Use partitioning to double or halve any number, including decimals to two decimal places* • 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 • 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 • 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 • ***Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy*** • ***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*** **Fractions & percentage** • Recognise mixed numbers and improper fractions and convert from one form to the other • *Count on and back in mixed number steps such as* $1\frac{1}{2}$ • Compare and order fractions whose denominators are all multiples of the same number *(including on a number line)* • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • Add and subtract fractions with denominators that are the same and that are multiples of the same number *(using diagrams)* • Write statements > 1 as a mixed number (e.g. $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$) • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and fractions with a denominator of a multiple of 10 or 25 • 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 involving fractions and decimals to three places***	**Measurement** • *Use, read and write standard units of length and mass* • Estimate *(and calculate)* volume ((e.g., using 1 cm^3 blocks to build cuboids (including cubes)) and capacity (e.g. using water) • *Understand the difference between liquid volume and solid volume* • *Continue to order temperatures including those below 0°C* • Use knowledge of multiplying and dividing by 1000 to convert between km and m, g and kg, l and ml • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • Solve problems involving converting between units of time (using a wider range of conversions ie. years into days.) • ***Use all four operations to solve problems involving measure using decimal notation (following conversion), including scaling*** **Statistics** • Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes) • Complete, read and interpret information in tables and timetables • Calculate and interpret the mode, median and range • ***Solve comparison, sum and difference problems using information presented in all types of graph including a line graph.*** **Area and perimeter** • Measure/calculate the perimeter of composite rectilinear shapes • Calculate and compare the area of rectangle, use standard units square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes **Angles, position and direction** • Describe positions on the first quadrant of a coordinate grid • Plot specified points and complete shapes • Identify, describe (using coordinates) and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed **Geometry- Shape & Symmetry** • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles • Use the properties of rectangles to deduce related facts and find missing lengths and angles • Identify 3-D shapes 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 half a turn (total 180°) - other multiples of 90°

YEAR 6	25 All of 24 and..	26 All of 25 and…	27 END OF KS2 Expectation All of 24, 25 and…
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Makes links between other concepts Calculates in the most efficient way Explains reasoning in a detailed mathematical way. **Exceptional achievement** #4 Working on the same aspect of maths at the level of the next, or higher year group	**Place value** • *Count forwards or backwards in steps of integers, decimals, powers of 10* • Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • Identify the value of each digit to three decimal places • *Identify, represent and estimate numbers using the number line* • *Order and compare numbers including integers, decimals and negative numbers* • *Find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more/less than any given number* • Round any whole number to a required degree of accuracy • Round decimals with three decimal places to the nearest whole number or one or two decimal places • Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • Use negative numbers in context, and calculate intervals across zero • ***Describe and extend number sequences including those with multiplication and division steps, inconsistent steps, alternating steps and those where the step size is a decimal*** • ***Solve number and practical problems that involve all of the abov*** **Addition and subtraction** • Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method) • Select a mental strategy appropriate for the numbers in the calculation • Recall and use addition and subtraction facts for 1 (with decimals to two decimal places) • Perform mental calculations including with mixed operations and large numbers and decimals • Add and subtract whole numbers and decimals using formal written methods (columnar addition and subtraction) • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy • Use knowledge of the order of operations to carry out calculations • ***Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why(linked to appropriate place value for this point)*** • ***Solve problems involving all four operations, including those with missing numbers*** **Multiplication and division** • *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)* • Identify common factors, common multiples and prime numbers • Perform mental calculations, including with mixed operations and large numbers • Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • Multiply one-digit numbers with up to two decimal places by whole numbers	**Fractions** • Compare and order fractions, including fractions > 1 *(including on a number line)* • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375 and $\frac{3}{8}$) • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) • Divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$) • ***Solve problems involving fractions*** • ***Solve problems which require answers to be rounded to specified degrees of accuracy*** **Ratio** • Solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication/division facts (type 1) • Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples (type 2) • ***Solve problems involving similar shapes where the scale factor is known or can be found*** **Percentages** • *Find simple percentages of amounts* • ***Solve problems involving the calculation of percentages (e.g. of measures and such as 15% of 260) and the use of percentages for comparison*** **Algebra** • Use simple formulae • Generate and describe linear number sequences • Express missing number problems algebraically • Find pairs of numbers that satisfy an equation with two unknowns • Enumerate possibilities of combinations of two variables	**Statistics** • Calculate and interpret the mean as an average • Interpret and construct pie charts and line graphs and use these to solve problems • Continue to complete and interpret information in a variety of sorting diagrams (including sorting properties of numbers and shapes) ***Solve comparison, sum and difference problems using information presented in all types of graph*** **Geometry- Shape & Symmetry** • Compare/classify geometric shapes based on the properties and sizes • Draw 2-D shapes using given dimensions and angles • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • Recognise, describe and build simple 3-D shapes, including making nets for a range of shapes. • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles • Find unknown angles in any triangles, quadrilaterals, regular polygons **Geomtery – Position and direction** • describe positions on the full coordinate grid (all four quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes. **Measures** • Use, read and write standard units of length, mass, volume and time using decimal notation to three decimal places • Convert between standard units of length, mass, volume and time using decimal notation to three decimal places • Convert between miles and kilometres • Recognise that shapes with the same areas can have different perimeters and vice versa • Calculate the area of parallelograms and triangles • Recognise when it is possible to use formulae for area and volume of shapes • 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 (e.g. mm^3 and km^3) • Calculate differences in temperature, including those that involved a positive and negative temperature ***Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate***

	• Divide numbers up to 4 digits by a two-digit whole number using the formal written methods of short or long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • Use written division methods in cases where the answer has up to two decimal places • ***Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy*** • ***Use knowledge of the order of operations to carry out calculations*** • ***Solve problems involving all four operations, including those with missing numbers***		

YEAR 1	10 All of EYFS expected and..	11 All of 10 and…	12 All of 10,11 and…
Mastery Is fluent in the skill Can use in varied situations Can apply in problems Can explain reasoning in written or verbal form **Greater depth #3** Can use in a wide range of deep and complex problems and situations. Makes links between other concepts Calculates in the most efficient way Explains reasoning in a detailed mathematical way. **Exceptional achievement** #4 Working on the same aspect of maths at the level of the next, or higher year group	**Place value** • Count to and across 100, forwards and backwards beginning from 0, 1 or any number. • Count in multiples of 2,5 and 10s • Read and write numbers to 100 in numerals • Read and write numbers from 1 to 20 in words. • Begin to recognise the place value of numbers beyond 20 (tens and ones) • Identify and represent numbers using object and pictorial representations including a number line (up to 100 and beyond) • Use the language of equal to, more than, less than, fewer, most and least • Given a number (up to 100) identify one more and one less • Recognise and create repeating patterns with numbers, objects and shapes. ***Solve problems and practical problems involving all of the above*** **Addition and subtraction** • Read, write and interpret mathematical statements involving addition (+) subtraction (-) and (=) signs. • Represent and use number bonds and related subtraction facts within 20. • (ie. 12 + 4 = 16) • Add and subtract one digit and two digit numbers to 20 including 0 (using objects and pictorial representations) • Solve one step problems that involve addition and subtraction (using objects and pictorial representations) • Solve missing number problems such as 7= ? – 9 • Recall and use doubles of all numbers to 10 and corresponding halves. ***Solve problems and practical problems involving all of the above***	**Multiplication and division** • Solve one step problems that involve multiplication and division, calculating using objects, pictures and arrays with the support of the teacher. **Fractions** • Recognise, find and name a half as one of two equal parts of an object, shape or quantity. • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. **Time** • Recognise and use language relating to dates, including days of the week, weeks, months and years • Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening • Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times • Compare, describe and solve practical problems for time (for example, quicker, slower, earlier, later) Measure and begin to record time (hours/minutes/seconds) *within children's range of counting competence* **Geometry- Shape & Symmetry** • Recognise and name common 2-D shapes, including rectangles (including squares), circles and triangles • Recognise and name common 3-D shapes, including cuboids (including cubes), pyramids and spheres • Describe position and direction	**Money** • Recognise and know the value of different denominations of coins and notes • Count up small amounts of money with a combination of 1p, 2p and 10p coins **Measures** • Measure and begin to record: - lengths and heights, *using non-standard and then manageable standard units (m/cm)* - mass/weight, *using non-standard and then manageable standard units (kg/g)* - capacity and volume *using non-standard and then manageable standard units (litres/ml)* - time (hours/minutes/seconds) *within children's range of counting competence* • 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) ***Statistics (non statutory content)*** • *Sort objects, numbers and shapes to a given criterion and their own* • *Present and interpret data in block diagrams using practical equipment* • *Ask and answer simple questions by counting the number of objects in each category* • *Ask and answer questions by comparing categorical data*

YEAR 2	13 All of 12 and..	14 All of 13 and…	15 All of 13,14 and…
Mastery Is fluent in the skill Can use in varied situations Can apply in problems Can explain reasoning in written or verbal form **Greater depth #3** Can use in a wide range of deep and complex problems and situations. Makes links between other concepts Calculates in the most efficient way Explains reasoning in a detailed mathematical way. **Exceptional achievement** #4 Working on the same aspect of maths at the level of the next, or higher year group	**Place value** • Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward • Read and write numbers to at least 100 in numerals and in words • Recognise the place value of each digit in a two-digit number (tens, ones) • Identify, represent and estimate numbers using different representations, including the number line (ie estimate where 65 would be on a number line 1-100) • Partition numbers in different ways (e.g. 23 = 20 + 3 and 23 = 10 + 13) • Compare and order numbers from 0 up to 100; use <, > and = signs • Find 1 or 10 more or less than a given number • Round numbers to at least 100 to the nearest 10 • Understand the connection between the 10 multiplication table and place value • Describe and extend simple sequences involving counting on or back in different steps • ***Use place value and number facts to solve problems*** **Addition and subtraction** • Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting) • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • Understand subtraction as take away and difference (how many more, how many less/fewer) • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • Recall and use number bonds for multiples of 5 totalling 60 (to support telling time to nearest 5 minutes) • 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 • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems • ***Solve problems with addition and subtraction including with missing numbers:*** ***- using concrete objects and pictorial representations, including those involving numbers, quantities and measures*** ***- applying their increasing knowledge of mental and written methods***	**Multiplication and division** • ***Understand multiplication as repeated addition*** • ***Understand division as sharing and grouping and that a division calculation can have a remainder*** • **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** • ***Derive and use doubles of simple two-digit numbers (numbers in which the ones total less than 10)*** • ***Derive and use halves of simple two-digit even numbers (numbers in which the tens are even)*** • **Calculate mathematical statements for multiplication *using repeated addition)* and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs** • **Solve problems involving multiplication and division *(including those with remainders)*, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts** **Fractions** • *Understand and use the terms numerator and denominator* • *Understand that a fraction can describe part of a set* • *Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be* • Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity • Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ *Count on and back in steps of* $\frac{1}{2}$ *and* $\frac{1}{4}$	**Money** • Recognise and use symbols for pounds (£) and pence (p) • Combine amounts to make a particular value • Find different combinations of coins that equal the same amounts of money • ***Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (up to and over £1)*** **Measures** • Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity and volume (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 simple problems in a practical context involving addition and subtraction of measures (including time)*** **Time** • Compare and sequence intervals of time • 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 • ***Solve simple problems in a practical context involving addition and subtraction of measures (including time)*** **Geometry- Shape & Symmetry** • Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] • 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 • Order/arrange combinations of mathematical objects in patterns/sequences **Statistics** • Compare and sort *objects, numbers and* common 2-D and 3-D shapes and everyday objects • Interpret and construct simple pictograms, tally charts, block diagrams and simple tables • Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • Ask and answer questions about totalling and comparing categorical data *how many chose…. And ….*

YEAR 2 END OF YEAR GREATER DEPTH	The pupil can reason about addition (e.g. pupil can reason that the sum of 3 odd numbers will always be odd). • The pupil can use multiplication facts to make deductions outside known multiplication facts (e.g. a pupil knows that multiples of 5 have one digit of 0 or 5 and uses this to reason that 18 × 5 cannot be 92 as it is not a multiple of 5) • The pupil can work out mental calculations where regrouping is required (e.g. 52 − 27; 91 – 73). • The pupil can solve more complex missing number problems (e.g. 14 + – 3 = 17; 14 + Δ = 15 + 27). • The pupil can determine remainders given known facts (e.g. given 15 ÷ 5 = 3 and has a remainder of 0, pupil recognises that 16 ÷ 5 will have a remainder of 1; knowing that 2 × 7 = 14 and 2 × 8 = 16, pupil explains that making pairs of socks from 15 identical socks will give 7 pairs and one sock will be left). • The pupil can solve word problems that involve more than one step (e.g. which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?). • The pupil can recognise the relationships between addition and subtraction and can rewrite addition statements as simplified multiplication statements (e.g. 10 + 10 + 10 + 5 + 5 = 3 × 10 + 2 × 5 = 4 × 10). • The pupil can find and compare fractions of amounts (e.g. 1 4 of £20 = £5 and 1 2 of £8 = £4 so 1 4 of £20 is greater than 1 2 of £8). • The pupil can read the time on the clock to the nearest 5 minutes. • The pupil can read scales in divisions of ones, twos, fives and tens in a practical situation where not all numbers on the scale are given. • The pupil can describe similarities and differences of shape properties (e.g. finds 2 different 2-D shapes that only have one line of symmetry; that a cube and a cuboid have the same number of edges, faces and vertices but can describe what is different about them).