

Year 4 – Maths Teaching Overview



| Autumn 1 | | |
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| Mental addition and subtraction (MAS) | Find pairs with a total of 100; add to the next multiple of 100 and subtract to the previous multiple of 100; subtract by counting up to find a difference; adding several numbers | <ul style="list-style-type: none"> work out bonds to 100. organise their work in a logical way begin to check that all solutions have been found. work out how many to the next multiple of 100 and the previous multiple of 100. solve subtractions of 3-digit numbers by counting up to next multiple of 10 then to multiple of 100 and then on. add several numbers using number facts, including multiples of 10 or 100. |
| Number and place-value (NPV); Mental addition and subtraction (MAS) | Read, write 4-digit numbers and know what each digit represents; compare 4-digit numbers using < and > and place on a number line; add 2-digit numbers mentally; subtract 2-digit and 3-digit numbers | <ul style="list-style-type: none"> recognise what each digit represents in a 4-digit number read and write 4-digit numbers including using zeros as place-holders. recognise what each digit represents in a 4-digit number compare 4-digit numbers writing inequality sentences using < and >. place 4-digit numbers on landmarked lines use their knowledge of place-value to estimate the positions of numbers on number lines order 4-digit numbers using a line. add 2-digit numbers mentally identify strategies appropriate to the numbers in a calculation. subtract using counting back and counting up choose an appropriate method to subtract (counting back or counting up) according to the number being subtracted. |
| Mental multiplication and division (MMD); Fractions, ratio and proportion (FRP) | Learn \times and \div facts for the 6 and 9x tables and identify patterns; multiply multiples of 10 by 1-digit numbers; multiply 2-digit numbers by 1-digit numbers (the grid method); find fractions of amounts | <ul style="list-style-type: none"> begin to recognise \times and \div facts for the 6 times-table. spot and describe patterns begin to know multiplication and division facts for the 9 times-table. use multiplication facts and place-value to multiply multiples of 10 by single-digit numbers. multiply 2-digit numbers by single-digit numbers, mentally and using the grid method. use division to find unit fractions of amounts. |
| Measurement (MEA); Mental addition and subtraction (MAS); Decimals, percentages and their equivalence to fractions (DPE) | Tell and write the time to the minute on analogue and digital clocks; calculate time intervals; measure in metres, centimetres and millimetres; convert lengths between units; record using decimal notation | <ul style="list-style-type: none"> tell time to the minute on digital and analogue clocks know there are 60 minutes in an hour. calculate time intervals in minutes tell the time on analogue and digital clocks. calculate time intervals in hours and minutes tell the time on analogue and digital clocks. use a ruler to measure to the nearest cm and mm |

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| | | <ul style="list-style-type: none"> estimate lengths in cm and mm begin to write measurements using decimal notation recognise relationship between mm/cm/m. |
| | | <ul style="list-style-type: none"> estimate measure and write to nearest m, cm and mm write measurements using two-place decimal notation, m and cm convert cm to m and vice versa. |
| Written addition and subtraction (WAS) | Add two 3-digit numbers using column addition; subtract a 3-digit number from a 3-digit number using an expanded column method (decomposing only in one column) | <ul style="list-style-type: none"> add two 3-digit numbers understand and use place-value to solve addition, writing it correctly. |
| | | <ul style="list-style-type: none"> add 3-digit numbers using written column method. |
| | | <ul style="list-style-type: none"> subtract 3-digit numbers using written method involving decomposition of the hundreds digit. |
| | | <ul style="list-style-type: none"> subtract 3-digit numbers using expanded written column subtraction (decomposing in one column only). |
| | | <ul style="list-style-type: none"> subtract a pair of 3-digit numbers using an expanded written method involving decomposition in one column. |
| Autumn 2 | | |
| Mental multiplication and division (MMD); Fractions, ratio and proportion (FRP) | Double 3-digit numbers and halve even 3-digit numbers; revise unit fractions; identify equivalent fractions; reduce a fraction to its simplest form; count in fractions (each fraction in its simplest form) | <ul style="list-style-type: none"> double 3-digit numbers using partitioning spot, describe and predict patterns. |
| | | <ul style="list-style-type: none"> halve even 3-digit numbers using partitioning. |
| | | <ul style="list-style-type: none"> compare unit fractions begin to see fractions equivalent to halves, thirds and quarters. |
| | | <ul style="list-style-type: none"> identify equivalent fractions reduce $\frac{1}{4}$s, $\frac{1}{6}$s, $\frac{1}{8}$s and $\frac{1}{10}$s to their simplest forms. |
| | | <ul style="list-style-type: none"> count in steps of $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{6}$ and $\frac{1}{10}$ reducing some fractions to their simplest form. |
| Number and place-value (NPV); Written addition and subtraction (WAS); Decimals, percentages and their equivalence to fractions (DPE) | Look at place-value in decimals and the relationship between tenths and decimals; add two 4-digit numbers; practise written and mental addition methods; use vertical addition to investigate patterns | <ul style="list-style-type: none"> begin to understand the relationship between tenths and decimals begin to use decimal notation. |
| | | <ul style="list-style-type: none"> multiply and divide whole numbers by 10 order fractions and decimals including mixed numbers using number lines use decimal notation. |
| | | <ul style="list-style-type: none"> add two 4-digit numbers using written method. |
| | | <ul style="list-style-type: none"> make sensible choices between mental and written methods for addition. |
| | | <ul style="list-style-type: none"> use logical thinking to look for patterns add 3-digit and 4-digit numbers using column addition. |
| Measurement (MEA); Statistics (STA) | Convert multiples of 100g into kilograms; convert multiples of 100ml into litres; read scales to the nearest 100ml; estimate capacities; draw bar charts, record and interpret information | <ul style="list-style-type: none"> weigh items to the nearest 100,g convert multiples of 100,g to kilograms and vice versa, e.g. 600,g to 0.6,kg. |
| | | <ul style="list-style-type: none"> choose likely weights for given items |

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| | | <ul style="list-style-type: none"> draw a bar chart to show weight. answer a question by collecting, displaying and interpreting data in a frequency table and bar chart, choosing an appropriate scale. measure capacity to the nearest 100,ml convert multiples of 100,ml to litres and vice versa, e.g. 600,ml to 0.6 litres. measure capacity to the nearest 100,ml. estimate capacity using 200,ml cup and 1 litre container as benchmark. |
| Number and place-value (NPV); Mental addition and subtraction (MAS); Written addition and subtraction (WAS) | Round 4-digit numbers to the nearest: 10, 100 and 1000; subtract 3-digit numbers using the expanded written version and the counting up mental strategy and decide which to use | <ul style="list-style-type: none"> round 4-digit numbers to the nearest 10, 100 and 1000. use a written method to subtract pairs of 3-digit numbers. subtract 3-digit numbers using expanded written subtraction. use counting up as a strategy to perform mental subtraction where the larger number has one or more zeros decide when it is easier/more efficient to count up to solve subtractions rather than use a written column method. use both expanded written column subtraction and counting up to solve subtractions decide when to use which method. |
| Mental multiplication and division (MMD); Written multiplication and division (WMD) | Use the grid method to multiply 3-digit by 1-digit numbers and introduce the vertical algorithm; begin to estimate products; divide numbers (up to 2 digits) by 1-digit numbers with no remainder, then with a remainder | <ul style="list-style-type: none"> use the grid method to multiply 3-digit numbers by single-digit numbers. multiply 3-digit numbers by single-digit numbers using the grid method begin to estimate answers to 3-digit numbers multiplied by 1-digit numbers. use the vertical algorithm to multiply 3-digit numbers by single-digit numbers. divide numbers just beyond known times-tables by single-digit numbers where there is no remainder. divide 2-digit numbers just beyond known times-tables by single-digit numbers including those which leave a remainder. |
| Spring 1 | | |
| | Place 4-digit numbers on landmarked lines; 0-10,000 and 1000-2000; round 4-digit numbers to the nearest 10, 100 and 1000; mentally add and subtract to/from 4-digit and 3-digit numbers using place-value; count on and back in multiples of 10, 100 and 1000; count on in multiples of 25 and 50; add and subtract multiples of 10 and 100 to/from 4-digit numbers | <ul style="list-style-type: none"> locate 4-digit numbers on a 0–10,000 line and on a 1000 line round 4-digit numbers to the nearest 1000, 100 and 10. solve additions and subtractions mentally using place-value count back in 1s across multiples of 10, 100 and 1000 to solve subtractions. count on and back in 10s, 100s, 1000s count on and back in 50s and 25s identify patterns in numbers and explain them using the relationship between the numbers and their knowledge of place-value. add multiples of 10 to 4-digit numbers add multiples of 100 to 4-digit numbers. |

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| | | <ul style="list-style-type: none"> • subtract multiples of 10 from 4-digit numbers • subtract multiples of 100 from 4-digit numbers. |
| | Use expanded written subtraction and compact written subtraction to subtract pairs of 3-digit numbers (one ‘exchange’); use expanded column subtraction and compact column subtraction to subtract pairs of 3-digit and 2-digit numbers from 3-digit numbers (one ‘carry’); learn the 7x table and ‘tricky’ facts; use the vertical algorithm to multiply 3-digit numbers by 1-digit numbers | <ul style="list-style-type: none"> • begin to use the compact method of column subtraction (decomposition) to solve subtractions requiring one ‘exchange’. • use expanded written subtraction and begin to use compact written subtraction to subtract pairs of 3-digit numbers and 2-digit numbers from 3-digit numbers (one ‘exchange’). • know the 7 times-table • know other ‘tricky’ facts, e.g. 6×8, 7×8 and 6×7. • use the vertical algorithm to multiply 3-digit numbers by 1-digit numbers • use grid method to multiply 3-digit numbers by 1-digit numbers. • use the vertical algorithm to multiply 3-digit numbers, including amounts of money, by 1-digit numbers. |
| | Use mental multiplication and division strategies; find non-unit fractions of 2-digit and 3-digit numbers; find equivalent fractions and use them to simplify fractions (halves, thirds, quarters) | <ul style="list-style-type: none"> • multiply and divide by 4 by doubling/or halving twice • multiply by 5 by multiplying by 10 and halving • multiply by 20 by doubling and multiplying by 10. • find non-unit fractions of 2-digit numbers, e.g. $\frac{5}{6}$ of 42. • find non-unit fractions of larger numbers and multiples of 10. • identify equivalent fractions, particularly those equivalent to one-half, one-third and one-quarter • begin to compare fractions with non-like denominators. • simplify fractions using equivalent fractions. |
| | Recognise and compare acute, right and obtuse angles; draw lines of a given length; identify perpendicular and parallel lines; recognise and draw line symmetry in shapes; sort 2D shapes according to their properties; draw shapes with given properties; draw the other half of symmetrical shapes | <ul style="list-style-type: none"> • identify right angle, acute and obtuse angles. • draw lines to a given length • recognise perpendicular and parallel lines. • describe the properties of 2D shapes • sort 2D shapes using given criteria. • draw shapes with given properties, e.g. acute/obtuse angles, parallel/perpendicular sides. • draw lines of symmetry • draw the other half of symmetrical shapes. |
| | Understand how to divide 2-digit and 3-digit numbers by 1-digit numbers using place-value and mental strategies; divide numbers by 1-digit numbers to give answers between 10 and 25, with remainders; identify factor pairs and use these to solve multiplications and divisions with larger numbers; use Frog to find complements to multiples of 1000; use Frog to find change from £10, £20 and £50 | <ul style="list-style-type: none"> • use mental strategies and tables facts to divide larger numbers by single-digit numbers to give answers of between 10 and 25, with no remainders. • use mental strategies and tables facts to divide numbers by single-digit numbers to give answers of between 10 and 25, with remainders. • identify factor pairs for multiples of numbers within the times-tables • use factor pairs to help them solve multiplications and divisions involving larger numbers. |

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| | | <ul style="list-style-type: none"> find complements to multiples of 1000 by counting up using complements to 100. |
| | | <ul style="list-style-type: none"> use counting up to find change from £10 and £20 make an amount of change using real coins. |
| Spring 2 | | |
| Decimals, percentages and their equivalence to fractions (DPE); Number and place-value (NPV); Written addition and subtraction (WAS) | Recognise, use, compare and order decimal numbers; understand place-value in decimal numbers; recognise that decimals are tenths; round decimals numbers to the nearest whole number; divide 2-digit numbers by 10 to get decimal numbers; multiply decimal numbers by 10 to get 2-digit numbers; divide 3-digit multiples of ten by 100 to get decimal numbers; multiply decimal numbers by 100 to get 3-digit multiples of ten; add 4-digit numbers using written method with answers greater than 10,000 | <ul style="list-style-type: none"> recognise and use decimal notation understand a decimal is a tenth. |
| | | <ul style="list-style-type: none"> compare one-place decimals and complete greater than and less than sentences round one-place decimals to nearest whole number. |
| | | <ul style="list-style-type: none"> divide 2-digit numbers by ten and 3-digit multiples of ten by a hundred to get decimal answers. Multiply decimals by ten and hundred understand place-value of one place decimals. |
| | | <ul style="list-style-type: none"> add 4-digit numbers using written method where answers are greater than 10000. |
| | | <ul style="list-style-type: none"> add 4-digit numbers using written addition with answers greater than 10,000 and having to move tens, hundreds & thousands read and interpret addition word problems. |
| Mental addition and subtraction (MAS); Written addition and subtraction (WAS); Decimals, percentages and their equivalence to fractions (DPE) | Add amounts of money using written methods and mentally using place-value and number facts; choose to add using the appropriate strategy: mental or written; subtract, choosing appropriate mental strategies: counting up or taking away (using counting back, place-value or number facts); solve subtractions using a suitable written method (column subtraction) | <ul style="list-style-type: none"> add amount of money using mental strategies know number facts e.g. bonds to all numbers from 1 to 20. |
| | | <ul style="list-style-type: none"> decide whether to use written or mental method to solve addition add several numbers. |
| | | <ul style="list-style-type: none"> solve subtractions of amounts of money mentally choose appropriate method for solving mental subtraction (count up or take-away). |
| | | <ul style="list-style-type: none"> subtract using a written column method use a methodical, systematic approach to investigating and reasoning. |
| | | <ul style="list-style-type: none"> decide the appropriate method to solve a subtraction either Column method or counting up (Frog) subtract using counting up (Frog) subtract using Column method |
| Measurement (MEA) | Tell the time on a 24-hour clock, using am and pm correctly; convert pm times to 24-hour clock and vice versa; use 24-hour clock in calculating intervals of time; measure and calculate perimeters of rectilinear shapes where each side is labelled in cm and m; find missing lengths in rectilinear composite shapes; find the perimeters of rectilinear shapes with some lengths not marked; convert from one | <ul style="list-style-type: none"> relate analogue pm times to digital 24 hour clock read and understand 24 hour clock digital times. |
| | | <ul style="list-style-type: none"> relate analogue to digital time using the 24 hour clock understand am and pm calculate time intervals using the 24 hour clock. |

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| | unit of length to another; solve word problems involving lengths including those involving perimeters | <ul style="list-style-type: none"> find the perimeter of a rectangle by calculation find the perimeter of a rectilinear shape by calculation. |
| | | <ul style="list-style-type: none"> find missing lengths in rectilinear shapes using the fact that opposite sides of a rectangle are equal find the perimeter of rectilinear shapes. |
| | | <ul style="list-style-type: none"> convert between SI units of length solve word problems involving length. |
| Number and place-value (NPV); Written addition and subtraction (WAS); Mental addition and subtraction (MAS) | Understand place value in 4-digit numbers; partition 4-digit numbers; solve subtraction of 4-digit numbers using column subtraction (decomposition); choose an appropriate method to solve subtractions, either mental or written, and either column or counting up (Frog) | <ul style="list-style-type: none"> read and write 4-digit numbers knowing what each digit represents partition 4-digit numbers into thousands, one thousand and the hundreds and then the tens and ones, i.e. $5821 = 4000 + 1800 + 21$. |
| | | <ul style="list-style-type: none"> use column subtraction to solve 4-digit – 4-digit, decomposing in two columns (ones and tens). solve 4-digit subtractions using written method. |
| | | <ul style="list-style-type: none"> solve 4-digit subtractions using the written method solve 4-digit subtractions using Frog |
| | | <ul style="list-style-type: none"> choose appropriate methods, mental or written, for solving subtractions solve subtractions using written and mental strategies. |
| Written multiplication and division (WMD) | Use the ladder method to multiply 3-digit numbers by 1-digit numbers; explore patterns; use mental strategies and tables facts to divide 2-digit and 3-digit numbers by 1-digit numbers to give answers between 10 and 35, without remainders; solve word problems | <ul style="list-style-type: none"> use a written method to multiply 3-digit numbers by single-digit numbers. |
| | | <ul style="list-style-type: none"> use a written method to multiply 3-digit numbers by single-digit numbers notice patterns, make and test predictions. |
| | | <ul style="list-style-type: none"> divide 2-digit and 3-digit numbers by single-digit numbers using mental strategies and times-tables facts, without remainders understand that multiplication and division are inverse operations. |
| | | <ul style="list-style-type: none"> use mental strategies to divide numbers by single-digit numbers, with remainders understand that multiplication and division are inverse operations. |
| | | <ul style="list-style-type: none"> identify the calculation(s) needed to solve a word problem. |
| Summer 1 | | |
| Number and place-value (NPV) | Read, write and compare 4-digit numbers, writing numbers in between and placing them on a line; find 1000 more or less than any given number; read, write and compare 5-digit numbers; recognise what each digit represents in a 5-digit number; read, use and compare negative numbers in the context of temperature | <ul style="list-style-type: none"> read, write and compare 4-digit numbers place 4-digit numbers on a line generate numbers between two 4-digit numbers. |
| | | <ul style="list-style-type: none"> read, write and compare 4-digit numbers say the number 100 more/less, 1000 more/less than any 4-digit multiple of 100. |
| | | <ul style="list-style-type: none"> begin to read and write 5-digit numbers understand what each digit represents in a 5-digit number. |

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| | | <ul style="list-style-type: none"> • read, use and compare negative numbers in the context of temperatures • begin to understand negative numbers are lower/smaller the greater the digits e.g. -21 is less than -12. |
| | | <ul style="list-style-type: none"> • read, use and compare negative numbers in the context of temperature & money • understand negative numbers are lower/smaller the greater the digits e.g. -21 is less than -12. |
| Decimals, percentages and their equivalence to fractions (DPE) | Multiply and divide numbers by 10 and 100 including decimals (tenths and hundredths); read and write decimals (to 1 and 2 places), understanding that these represent parts (tenths and hundredths) of numbers; mark one and two place decimals on a line; count in tenths (0.1s) and hundredths (00.1s); say the number one tenth (0.1) and one hundredth (00.1) more or less than a given number; round decimal numbers to the nearest whole number | <ul style="list-style-type: none"> • read, write and compare decimal numbers (to 1- or 2-places) • multiply and divide numbers by ten and hundred understanding this involves a shift of the digits (can be on a PV 100s/10s/1s grid). |
| | | <ul style="list-style-type: none"> • read, write and compare decimal numbers to 2-places • understand decimals represent tenths and hundredths (parts) of whole numbers. |
| | | <ul style="list-style-type: none"> • read, write and compare decimal numbers to 2-places • place 1-place and 2-place decimals on a line • understand decimals represent tenths and hundredths (parts) of whole numbers • begin to add to the next whole number. |
| | | <ul style="list-style-type: none"> • read, write and compare decimals using decimal notation to 2-places • count on and back in 0.1s (tenths) • begin to count on and back in 0.01s (hundredths). |
| | | <ul style="list-style-type: none"> • read, write, compare and order decimals (1-place) • find decimal numbers between 2 numbers • round 1-place decimals to the nearest whole number. |
| Mental multiplication and division (MMD); Written multiplication and division (WMD); Number and place-value (NPV) | Learn 11 and 12x tables; develop and use effective mental multiplication strategies; use a vertical written method to multiply 3-digit numbers by 1-digit numbers; use rounding to estimate answers; use a written method to multiply 3-digit numbers, including amounts of money by 1-digit numbers; multiply 2-digit and 3-digit numbers by 1-digit numbers; understand how division ‘undoes’ multiplication and vice versa; divide above the tables facts using multiples of ten | <ul style="list-style-type: none"> • know their 11 times-table • begin to know their 12 time table • spot patterns. |
| | | <ul style="list-style-type: none"> • multiply two-digit numbers or 3-digit numbers by 1-digit numbers, mentally, using jottings where necessary • use a mental strategy to multiply by 4, 5 or 8. |
| | | <ul style="list-style-type: none"> • use a vertical algorithm to multiply 3-digit numbers by single-digit numbers • use rounding to make a rough approximation. |
| | | <ul style="list-style-type: none"> • can approximate when multiplying • use a vertical algorithm to multiply 3-digit numbers by single-digit numbers • use a written method to multiply amounts of money by single-digit numbers, e.g. $4 \times \pounds 4.67$. |
| | | <ul style="list-style-type: none"> • understand how division ‘undoes’ multiplication and vice versa • multiply and divide 2-digit numbers. |

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| <p>Number and place-value (NPV); Geometry: properties of shapes (GPS); Measurement (MEA)</p> | <p>Recognise and write Roman numerals to 100; begin to know the history of our number system including zero; calculate area and perimeter of rectangles and simple rectilinear shapes using addition and multiplication; recognise, name and classify 2D shapes identifying polygons, regular and irregular; sort 2D and 3D shapes according to properties including types of quadrilaterals and triangles; revise 3D shapes; look at 2D shaped sides on 3D shapes</p> | <ul style="list-style-type: none"> • read and write Roman numerals to 50? 100? • have an understanding of where our number system came from and that we used Roman Numerals before. • calculate area of rectangles using counting or multiplication • calculate area of simple rectilinear shapes using counting or multiplication • understand area is the measurement of how many squares a shape covers with its surface? (Squares in this case being cm^2 and m^2). • calculate area of simple rectilinear shapes using the fact they are comprised of two rectangles • calculate perimeter of rectilinear shapes using doubling, and addition • understand the difference between area and perimeter and use appropriate measures (i.e. m^2 and cm^2 for area and cm & m for perimeter). • name and describe common 2D shapes including using the terms: polygon, triangle, quadrilateral, pentagon, hexagon, and octagon • identify properties of shapes using terms: angle, right angle; sides; vertices; parallel; regular, irregular, opposite • begin to classify and name different types of quadrilateral and triangles. • name and describe properties of 3D shapes; sphere, cylinder, cone, cube, cuboid, triangular prism, triangular pyramid, square based pyramid and hexagonal prism. |
| <p>Decimals, percentages and their equivalence to fractions (DPE); Fractions, ratio and proportion (FRP)</p> | <p>Understand, read and write two place decimals; compare two place decimals in the context of lengths; add and subtract 0.1 and 00.1; say a number one tenth (0.1) and one hundredth (00.1) more or less than a given number; revise equivalent fractions; write fractions with different denominators with a total of 1; recognise decimal and fraction equivalents</p> | <ul style="list-style-type: none"> • write lengths in metres to two decimal places. • compare numbers with two decimal places in the context of length. • add and subtract 0.1 to numbers with one decimal place • add and subtract 0.01 to numbers with two decimal places. • identify equivalent fractions • write additions of fractions with different denominators with a total of 1. • know decimals equivalents for $\frac{1}{10}$, $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$ • write lengths in fractions as decimals and in metres and centimetres • solve problems involving length. |
| <p>Summer 2</p> | | |
| <p>Mental addition and subtraction (MAS); Mental multiplication and division (MMD); Written multiplication and division (WMD)</p> | <p>Mentally add a 2-digit number to a 2-, 3- or 4-digit number; subtract 2-, 3-, and 4-digit numbers using counting up (Frog); derive factors of 2-digit numbers; use factors and doubling to solve multiplication mentally; solve division using mental strategies; understand division is multiplication with holes, i.e. $3 \times ? = 12$ therefore $12 \div 3 = ?$;</p> | <ul style="list-style-type: none"> • add 2-digit numbers mentally to 2-, 3-, & 4-digit numbers • use mental strategies for adding. • solve subtractions of 3- & 4-digit numbers using counting up (Frog) • use knowledge of bonds to 100 or bonds to 10 & multiple of 10 bonds to 100 to count up efficiently. |

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| | understand that division and multiplication are inverse operations; solve word problems, including 2-step problems, choosing an appropriate method | <ul style="list-style-type: none"> • solve multiplications using mental strategies including using factors • use doubling and multiplying by three to solve multiplications mentally. |
| | | <ul style="list-style-type: none"> • divide using mental strategies • divide by 2, 4 and 8 using halving, once, twice and three times. |
| | | <ul style="list-style-type: none"> • solve word problems using addition, subtraction, multiplication or division • use mental strategies to solve calculations. |
| Written addition and subtraction (WAS); Mental addition and subtraction (MAS) | Solve written addition of two 4-digit numbers; add amounts of money (pounds and pence) using column addition; solve 4-digit subtractions using written column method (decomposition) or counting up (Frog); solve 4-digit – 3-digit subtractions using written column method (decomposition); check subtraction using addition; solve word problems choosing an appropriate method | <ul style="list-style-type: none"> • add two 4-digit numbers using column addition (compact or expanded) • use logical reasoning to create additions of 4-digit numbers to a given total. |
| | | <ul style="list-style-type: none"> • add amounts of money using column addition. |
| | | <ul style="list-style-type: none"> • subtract 4-digit numbers using column subtraction (decomposition) • begin to check their answers using addition. |
| | | <ul style="list-style-type: none"> • subtract 4-digit numbers using column subtraction (decomposition) • begin to check their answers using addition. |
| | | <ul style="list-style-type: none"> • find change from amounts of pounds by counting up • solve subtraction problems involving amounts of money. |
| Geometry: position and direction (GPD); Statistics (STA) | Use co-ordinates to draw polygons; find the co-ordinates of shapes after translation; draw and interpret bar charts and pictograms; draw line graphs and understand that intermediate points have meaning | <ul style="list-style-type: none"> • use co-ordinates in the first quadrant • recognise simple irregular polygons. |
| | | <ul style="list-style-type: none"> • translate a polygon and write the co-ordinates of its new position. |
| | | <ul style="list-style-type: none"> • read and interpret pictograms where one symbol represents two units • read and interpret bar charts where one step represents two units. |
| | | <ul style="list-style-type: none"> • draw a line graph • use it to work out intermediate values. |
| | | <ul style="list-style-type: none"> • draw a line graph • use it to work out intermediate values. |
| Written multiplication and division (WMD); Fractions, ratio and proportion (FRP); Decimals, percentages and their equivalence to fractions (DPE) | Use the vertical algorithm (Ladder) to multiply 3-digit numbers by 1-digit numbers; find non-unit fraction of amounts, using ‘chunking’; add fractions with like denominators, including totals greater than 1; divide by 10 and 100 (to give answers with 1 and 2 decimal places) | <ul style="list-style-type: none"> • use a vertical algorithm to multiply 3-digit numbers by single-digit numbers • use rounding to make a rough approximation. |
| | | <ul style="list-style-type: none"> • sustain a line of enquiry, make a and test a hypothesis • use the Ladder method to multiply 3-digit numbers by single-digit numbers. |
| | | <ul style="list-style-type: none"> • find non-unit fractions of amounts. |
| | | <ul style="list-style-type: none"> • add fractions with the same denominator including those with an answer greater than 1 • begin to convert improper fractions to mixed numbers. |

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| | | <ul style="list-style-type: none"> multiply and divide 1-digit and 2-digit numbers by 10 and by 100 to give whole numbers answers or answer with one or two decimal places. |
| <p>Written multiplication and division (WMD); Mental multiplication and division (MMD); Fractions, ratio and proportion (FRP)</p> | <p>Multiply 2-digit numbers by 11 and 12; look for patterns and write rules; multiply 2-digit numbers by numbers between 10 and 20 using the grid method; begin to use the grid method to multiply pairs of 2-digit numbers; use mental strategies and tables facts to divide 2-digit and 3-digit numbers by 1-digit numbers to give answers between 20 and 50, with and without remainders; find non-unit fractions of amounts</p> | <ul style="list-style-type: none"> multiply 2-digit numbers by 11 and 12 look for patterns and write rules. |
| | | <ul style="list-style-type: none"> use the grid method to multiply 2-digit numbers by numbers between 10 and 20. |
| | | <ul style="list-style-type: none"> begin to multiply pairs of 2-digit numbers together using the grid method |
| | | <ul style="list-style-type: none"> use mental strategies and tables facts to divide 2-digit and 3-digit numbers by single-digit numbers to give answers of between 20 and 50, with and without remainders use multiplication to check their answers. |
| | | <ul style="list-style-type: none"> find unit fractions of amounts and use multiplication to check find non-unit fractions of amounts. |