

Year 4, Autumn Term 1

Wk Strands

- | Wk | Strands |
|----|--|
| 1 | MAS Mental addition and subtraction; PRA Problem solving, reasoning and algebra |
| 2 | NPV Number and place value; MAS Mental addition and subtraction |
| 3 | MMD Mental multiplication and division; PRA Problem solving, reasoning and algebra; WMD Written multiplication and division; FRP Fractions, ratio and proportion |
| 4 | MEA Measurement; DPE Decimals, percentages and their equivalence to fractions |
| 5 | WAS Written addition and subtraction |

Progression Focus

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| Addition and subtraction Weeks 1 and 2 focus on mental strategies in addition and subtraction, including the use of a robust understanding of place value. |
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| Multiplication and division Week 3 focuses on learning and using multiplication and division facts in solving more advanced problems. |
| Time; length Week 4 focuses on telling the time, calculating time intervals and using m, cm and mm in the measurement of lengths. |
| Addition and subtraction Week 5 focuses on understanding and using formal written methods of addition and subtraction. |

Weekly Summary

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| Finding pairs with a total of 100; adding to the next multiple of 100 and subtracting to the previous multiple of 100; subtract by counting up to find a difference; adding several numbers |
| 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 |
| Learn \times and \div facts for the 6 and 9 times-table and identify patterns; multiply multiples of 10 by single-digit numbers; multiply 2-digit numbers by single-digit numbers (the grid method); find fractions of amounts |
| 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 |
| 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) |

Year 4, Autumn Term 2

Wk Strands

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| 6 | MMD Mental multiplication and division; PRA Problem solving, reasoning and algebra; FRP Fractions, ratio and proportion |
| 7 | DPE Decimals, percentages and their equivalence to fractions; NPV Number and place value; WAS Written addition and subtraction; MAS Mental addition and subtraction |

Progression Focus

- | Progression Focus |
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| Fractions and decimals; addition Weeks 6 and 7 focus on fractions and decimals, and end by using place value in formal addition. |
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Weekly Summary

- | Weekly Summary |
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| 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) |
| 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 |

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| 8 | DPE Decimals, percentages and their equivalence to fractions; MEA Measurement; STA Statistics; PRA Problem solving, reasoning and algebra | Measures; data Week 8 focuses on using SI units in measuring, reading scales and collecting, interpreting and recording data. | Convert multiples of 100 g into kilograms; convert multiples of 100 ml into litres; read scales to the nearest 100 ml; estimate capacities; draw bar charts, record and interpret information |
| 9 | NPV Number and place value; WAS Written addition and subtraction; MAS Mental addition and subtraction | Subtraction Week 9 focuses on using place value to underpin an understanding of different methods in subtraction and to choose between these. | 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 |
| 10 | MMD Mental multiplication and division; WMD Written multiplication and division; PRA Problem solving, reasoning and algebra | Multiplication and division Week 10 focuses on developing a knowledge and understanding of multiplication and division to enable children to tackle harder problems. | Use the grid method to multiply 3-digit by single-digit numbers and introduce the vertical algorithm; begin to estimate products; divide numbers (up to 2 digits) by single-digit numbers with no remainder, then with a remainder |

Year 4, Spring Term 1

Wk Strands

11 **NPV** Number and place value; **PRA** Problem solving, reasoning and algebra

12 **WAS** Written addition and subtraction; **MMD** Mental multiplication and division; **WMD** Written multiplication and division; **PRA** Problem solving, reasoning and algebra; **MEA** Measurement

13 **MMD** Mental multiplication and division; **FRP** Fractions, ratio and proportion; **PRA** Problem solving, reasoning and algebra

14 **GPS** Geometry: properties of shapes; **PRA** Problem solving, reasoning and algebra

Progression Focus

Place value; addition and subtraction
Week 11 focuses on ensuring a robust understanding of place value and numbers to 10,000, including counting in equal steps; this understanding is then used to underpin mental addition and subtraction.

Subtraction; multiplication
Week 12 focuses on written calculation methods underpinned by a secure understanding of place value: vertical subtraction and multiplication methods, and multiplication problems involving money.

Division; fractions
Week 13 focuses on mental multiplication and division strategies, which underpin the work on proper fractions that follows, including finding non-unit fractions of amounts, equivalent fractions and simplifying.

2D shapes
Week 14 focuses on properties of 2D shapes, including angles, parallel and perpendicular lines, and symmetry.

Weekly Summary

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

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 7× table and 'tricky' facts; use the vertical algorithm to multiply 3-digit numbers by 1-digit numbers; solve simple money problems with decimals to two decimal places

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)

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 and explain reasoning; draw the other half of

15 **MMD** Mental multiplication and division; **WMD** Written multiplication and division; **MAS** Mental addition and subtraction; **PRA** Problem solving, reasoning and algebra

Mental calculation strategies

Week 15 focuses on the relationship between the operations, particularly multiplication and division, and then between addition and subtraction; these important inverse relationships are linked to mental calculation.

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

Year 4, Spring Term 2

Wk Strands

16 **DPE** Decimals, percentages and their equivalence to fractions; **NPV** Number and place value; **PRA** Problem solving, reasoning and algebra; **WAS** Written addition and subtraction

17 **MAS** Mental addition and subtraction; **WAS** Written addition and subtraction; **MEA** Measurement; **PRA** Problem solving, reasoning and algebra

18 **MEA** Measurement; **PRA** Problem solving, reasoning and algebra

19 **NPV** Number and place value; **WAS** Written addition and subtraction; **MAS** Mental addition and subtraction

20 **WMD** Written multiplication and division; **PRA** Problem solving, reasoning and algebra; **MAS** Mental addition and subtraction; **WAS** Written addition and subtraction

Progression Focus

Place value

Week 16 focuses on ensuring a robust understanding of that place value in decimal numbers.

Addition and subtraction

Week 17 focuses on using understanding of place value to choose appropriate strategies when calculating with decimals or money; written methods then include larger whole numbers.

Time; length

Week 18 focuses on time-telling and the 24-hour clock, including calculating time intervals; the week ends with some practice in finding missing lengths in rectilinear shapes.

Subtraction

Week 19 focuses on using understanding of place value to solve subtraction problems using appropriate methods.

Multiplication and division

Week 20 focuses on developing a good understanding of the processes involved in more complex written algorithms for multiplication and division.

Weekly Summary

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 four digit numbers using written method with answers greater than 10 000

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)

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 unit of length to another; solve word problems involving lengths including those involving perimeters

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)

Use the vertical algorithm 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

Year 4, Summer Term 1

Wk Strands

21 **NPV** Number and place value; **PRA** Problem solving, reasoning and algebra

Progression Focus

Place value and decimals

Weeks 21 and 22 focus on consolidating place value in 4- and 5-digit numbers, extending to decimals; including multiplying and dividing by 10 and 100, placing numbers (including negative) on lines, and adding and subtracting powers of 10.

Weekly Summary

Read, write and compare 4-digit numbers and place 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

22 **MAS** Mental addition and subtraction; **DPE** Decimals, percentages and their equivalence to fractions

Place value and decimals

Weeks 21 and 22 focus on consolidating place value in 4- and 5-digit numbers, extending to decimals; including multiplying and dividing by 10 and 100, placing numbers (including negative) on lines, and adding and subtracting powers of 10.

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 1- and 2- place decimals on a line; count in tenths (0.1s) and hundredths (0.01s); multiply numbers with up to 2 decimal places by 10 and 100, and divide numbers by 10 and 100; say the number one tenth and one hundredth more or less than a given number; round decimal numbers to the nearest whole number

23 **MMD** Mental multiplication and division; **PRA** Problem solving, reasoning and algebra; **NPV** Number and place value; **WMD** Written multiplication and division; **MEA** Measurement

Multiplication and division

Week 23 focuses on extending knowledge of times tables, using this to develop understanding of harder written multiplication algorithms; and on division as the inverse of multiplication.

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 10

24 **NPV** Number and place value; **MEA** Measurement; **GPS** Geometry: properties of shapes

Area and perimeter; 2D and 3D shapes

Week 24 focuses on calculating perimeters and areas of shapes, and on properties of 2D and 3D shapes.

Recognise and read Roman numerals to 100; begin to know the history of our number system including 0; calculate area and perimeter of rectilinear shapes using multiplication and addition, or counting; recognise, name and classify 2D shapes identifying regular and irregular polygons; sort 2D shapes according to properties including types of quadrilaterals and triangles; revise 3D shapes, consider 2D-shaped sides on 3D shapes, and sort shapes

25 **DPE** Decimals, percentages and their equivalence to fractions; **PRA** Problem solving, reasoning and algebra; **FRP** Fractions, ratio and proportion

Fractions and decimals

Week 25 focuses on developing and enhancing the concept of decimal number, including relating decimal fractions to proper fractions and recognising equivalents.

Understand, read and write 2-place decimals; compare 2-place decimals in the context of lengths; add and subtract 0.1 and 0.01 and say a number one-tenth (0.1) or one-hundredth (0.01) 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

Year 4, Summer Term 2

Wk Strands

- 26 **MAS** Mental addition and subtraction; **MMD** Mental multiplication and division; **WMD** Written multiplication and division; **PRA** Problem solving, reasoning and algebra
- 27 **WAS** Written addition and subtraction; **PRA** Problem solving, reasoning and algebra; **MAS** Mental addition and subtraction
- 28 **GPD** Geometry: position and direction; **STA** Statistics
- 29 **WMD** Written multiplication and division; **PRA** Problem solving, reasoning and algebra; **MMD** Mental multiplication and division; **FRP** Fractions, ratio and proportion; **DPE** Decimals, percentages and their equivalence to fractions
- 30 **MMD** Mental multiplication and division; **PRA** Problem solving, reasoning and algebra; **WMD** Written multiplication and division; **FRP** Fractions, ratio and proportion

Progression Focus

- Addition and subtraction; multiplication and division**
Week 26 focuses on adding and subtracting 2-, 3- and 4- digit numbers; and on using knowledge of factors, products and doubling to solve multiplication problems mentally.
- Addition and subtraction**
Week 27 focuses on addition and subtraction using written column methods.
- Coordinate geometry; statistics and data**
Week 28 focuses on using coordinate grids; and developing that understanding to draw line graphs and know that intermediate points have meaning.
- Multiplication and division; fractions**
Weeks 29 and 30 focus on enhancing mental and written strategies for multiplication and division; and link this to unit and non-unit fractions and the decimal results of dividing by 10 and 100.
- Multiplication and division; fractions**
Weeks 29 and 30 focus on enhancing mental and written strategies for multiplication and division; and link this to unit and non-unit fractions and the decimal results of dividing by 10 and 100.

Weekly Summary

- Add two 2-digit numbers or a 2-digit number to a 3- or 4-digit number mentally; subtract 2-, 3- and 4-digit numbers using counting up; derive factors of 2-digit numbers and use factors and doubling to solve multiplication mentally; solve integer scaling problems using mental strategies and spot a relationship between products; solve correspondence problems, using a systematic approach and calculate using mental multiplication strategies
- Solve written addition of two 4-digit numbers; add amounts of money (pounds and pence) using column addition; solve 4-digit minus 4-digit and 4-digit minus 3-digit subtractions using written column method (decomposition) and check subtraction with addition; solve word problems choosing an appropriate method
- Use coordinates to draw polygons; find the coordinates of shapes after translation; draw and interpret bar charts and pictograms; draw line graphs and understand that intermediate points have meaning
- 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)
- 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

