**Plan:** Abacus Year 4 **School Name:** ST JEROME C of E BILINGUAL SCHOOL **Teacher:** Liz Clarke **Class:** Carlile **Date:** 12/05/2021

## Year 4, MichaelmasTerm 1

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| Wk | Strands | Progression Focus | Weekly Summary |
| 1 | **MAS** Mental addition and subtraction; **PRA** Problem solving, reasoning and algebra | **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. | 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 |
| 2 | **NPV** Number and place value; **MAS** Mental addition and subtraction | **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. | 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 |
| 3 | **MMD** Mental multiplication and division; **PRA** Problem solving, reasoning and algebra; **WMD** Written multiplication and division; **FRP** Fractions, ratio and proportion | **Multiplication and division**  Week 3 focuses on learning and using multiplication and division facts in solving more advanced problems. | Learn × and ÷ 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 |
| 4 | **MEA** Measurement; **DPE** Decimals, percentages and their equivalence to fractions | **Time; length**  Week 4 focuses on telling the time, calculating time intervals and using m, cm and mm in the measurement of lengths. | 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 |
| 5 | **WAS** Written addition and subtraction | **Addition and subtraction**  Week 5 focuses on understanding and using formal written methods of addition and subtraction. | 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, Michaelmas Term 2

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| Wk | Strands | Progression Focus | Weekly Summary |
| 6 | **MMD** Mental multiplication and division; **PRA** Problem solving, reasoning and algebra; **FRP** Fractions, ratio and proportion | **Fractions and decimals; addition**  Weeks 6 and 7 focus on fractions and decimals, and end by using place value in formal addition. | 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) |
| 7 | **DPE** Decimals, percentages and their equivalence to fractions; **NPV** Number and place value; **WAS** Written addition and subtraction; **MAS** Mental addition and subtraction | **Fractions and decimals; addition**  Weeks 6 and 7 focus on fractions and decimals, and end by using place value in formal addition. | 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 |
| 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, Epiphany Term 1

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| Wk | Strands | Progression Focus | Weekly Summary |
| 11 | **NPV** Number and place value; **PRA** Problem solving, reasoning and algebra | **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. | 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 |
| 12 | **WAS** Written addition and subtraction; **MMD** Mental multiplication and division; **WMD** Written multiplication and division; **PRA** Problem solving, reasoning and algebra; **MEA** Measurement | **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. | Use expanded written subtraction and compact written subtraction to subtract pairs of 3-digit numbers (one ʻexchangeʼ); use expanded column subtraction and compact column subtraction to subtract pairs of 3-digit and 2-digit numbers from 3-digit numbers (one ʻcarryʼ); learn the 7× table and ʻtrickyʼ facts; use the vertical algorithm to multiply 3-digit numbers by 1-digit numbers; solve simple money problems with decimals to two decimal places |
| 13 | **MMD** Mental multiplication and division; **FRP** Fractions, ratio and proportion; **PRA** Problem solving, reasoning and algebra | **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. | 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) |
| 14 | **GPS** Geometry: properties of shapes; **PRA** Problem solving, reasoning and algebra | **2D shapes**  Week 14 focuses on properties of 2D shapes, including angles, parallel and perpendicular lines, and symmetry. | 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 symmetrical shapes |
| 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. | 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, Epiphany Term 2

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| Wk | Strands | Progression Focus | Weekly Summary |
| 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 | **Place value**  Week 16 focuses on ensuring a robust understanding of that place value in decimal numbers. | 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 |
| 17 | **MAS** Mental addition and subtraction; **WAS** Written addition and subtraction; **MEA** Measurement; **PRA** Problem solving, reasoning and algebra | **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. | 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) |
| 18 | **MEA** Measurement; **PRA** Problem solving, reasoning and algebra | **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. | 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 |
| 19 | **NPV** Number and place value; **WAS** Written addition and subtraction; **MAS** Mental addition and subtraction | **Subtraction**  Week 19 focuses on using understanding of place value to solve subtraction problems using appropriate methods. | 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) |
| 20 | **WMD** Written multiplication and division; **PRA** Problem solving, reasoning and algebra; **MAS** Mental addition and subtraction; **WAS** Written addition and subtraction | **Multiplication and division**  Week 20 focuses on developing a good understanding of the processes involved in more complex written algorithms for multiplication and division. | 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, Trinity Term 1

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| Wk | Strands | Progression Focus | Weekly Summary |
| 21 | **NPV** Number and place value; **PRA** Problem solving, reasoning and algebra | **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. | 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 12× 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 ʻundoesʼ 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, Trinity Term 2

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| Wk | Strands | Progression Focus | Weekly Summary |
| 26 | **MAS** Mental addition and subtraction; **MMD** Mental multiplication and division; **WMD** Written multiplication and division; **PRA** Problem solving, reasoning and algebra | **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. | 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 |
| 27 | **WAS** Written addition and subtraction; **PRA** Problem solving, reasoning and algebra; **MAS** Mental addition and subtraction | **Addition and subtraction**  Week 27 focuses on addition and subtraction using written column methods. | 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 minute 3-digit subtractions using written column method (decomposition) and check subtraction with addition; solve word problems choosing an appropriate method |
| 28 | **GPD** Geometry: position and direction; **STA** Statistics | **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. | 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 |
| 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 | **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. | Use the vertical algorithm (ladder) to multiply 3-digit numbers by 1-digit numbers; find non-unit fraction of amounts, using ʻchunkingʼ; add fractions with like denominators, including totals greater than 1; divide by 10 and 100 (to give answers with 1 and 2 decimal places) |
| 30 | **MMD** Mental multiplication and division; **PRA** Problem solving, reasoning and algebra; **WMD** Written multiplication and division; **FRP** Fractions, ratio and proportion | **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. | 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 |