

Plan: Abacus Year 4**Date:** 08/10/14 **School Name:** All Saints CE Primary School **Teacher:** **Class:** (No default class)

| Autumn Term 1 | | |
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| Wk | Strands | Weekly Summary |
| 1 | Mental addition and subtraction (MAS); Problem solving, reasoning and algebra (PRA) | 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 | 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 |
| 3 | Mental multiplication and division (MMD); Problem solving, reasoning and algebra (PRA); Fractions, ratio and proportion (FRP) | 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 |
| 4 | 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 |
| 5 | 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) |

| Autumn Term 2 | | |
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| Wk | Strands | Weekly Summary |
| 6 | Mental multiplication and division (MMD); Problem solving, reasoning and algebra (PRA); 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) |
| 7 | Decimals, percentages and their equivalence to fractions (DPE); Number and place value (NPV); Written addition and subtraction (WAS) | 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 | Decimals, percentages and their equivalence to fractions (DPE); Measurement (MEA); Statistics (STA); Problem solving, reasoning and algebra (PRA) | 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 | Number and place value (NPV); Written addition and subtraction (WAS); Mental addition and subtraction (MAS) | 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 | Mental multiplication and division (MMD); Written multiplication and division (WMD); Problem solving, reasoning and algebra (PRA) | 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 |

| Spring Term 1 | | |
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| Wk | Strands | Weekly Summary |
| 11 | Number and place value (NPV); Problem solving, reasoning and algebra (PRA) | 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 |



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| 12 | Written addition and subtraction (WAS); Mental multiplication and division (MMD); Written multiplication and division (WMD); Measurement (MEA); Problem solving, reasoning and algebra (PRA) | 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 |
| 13 | Mental multiplication and division (MMD); Fractions, ratio and proportion (FRP); Problem solving, reasoning and algebra (PRA) | 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 | Geometry: properties of shapes (GPS); Problem solving, reasoning and algebra (PRA) | 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 | Mental multiplication and division (MMD); Written multiplication and division (WMD); Mental addition and subtraction (MAS); Problem solving, reasoning and algebra (PRA) | 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 |

| Spring Term 2 | | |
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| Wk | Strands | Weekly Summary |
| 16 | Decimals, percentages and their equivalence to fractions (DPE); Number and place value (NPV); Problem solving, reasoning and algebra (PRA); Written addition and subtraction (WAS) | Recognise, use, compare and order decimal numbers; understand place value in decimal numbers; recognise that decimals are tenths; round decimal 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 | Mental addition and subtraction (MAS); Written addition and subtraction (WAS); Measurement (MEA); Problem solving, reasoning and algebra (PRA) | 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 | Measurement (MEA); Problem solving, reasoning and algebra (PRA) | 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 | 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) |
| 20 | Written multiplication and division (WMD); Problem solving, reasoning and algebra (PRA) | 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 |



| Summer Term 1 | | |
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| Wk | Strands | Weekly Summary |
| 21 | Number and place value (NPV); Problem solving, reasoning and algebra (PRA) | 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 | Mental addition and subtraction (MAS); 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 1- and 2- place decimals on a line; count in tenths (0.1s) and hundredths (00.1s); 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 | Mental multiplication and division (MMD); Problem solving, reasoning and algebra (PRA); Number and place value (NPV); Written multiplication and division (WMD); Measurement (MEA) | Learn 11 and 12 \times 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 | Number and place value (NPV); Measurement (MEA); Geometry: properties of shapes (GPS) | Recognise and write 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 | Decimals, percentages and their equivalence to fractions (DPE); Problem solving, reasoning and algebra (PRA); Fractions, ratio and proportion (FRP) | 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 |

| Summer Term 2 | | |
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| Wk | Strands | Weekly Summary |
| 26 | Mental addition and subtraction (MAS); Mental multiplication and division (MMD); Written multiplication and division (WMD); Problem solving, reasoning and algebra (PRA) | 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 | Written addition and subtraction (WAS); Problem solving, reasoning and algebra (PRA); 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 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 |
| 28 | Geometry: position and direction (GPD); Statistics (STA) | 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 |



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| | | points have meaning |
| 29 | Written multiplication and division (WMD); Problem solving, reasoning and algebra (PRA); Mental multiplication and division (MMD); 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) |
| 30 | Mental multiplication and division (MMD); Problem solving, reasoning and algebra (PRA); Written multiplication and division (WMD); Fractions, ratio and proportion (FRP) | 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 |

