OLSA Maths Year 4 Full Year Plan - Abacus

Year 4, Autumn Term 1

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
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
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
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
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, Autumn Term 2

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)
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
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
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
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

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
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 '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
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)
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
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, Spring Term 2

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
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)
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

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)
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, Summer Term 1

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
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
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 'undoes' multiplication and vice versa; divide above the tables facts using multiples of 10
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
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

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

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
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
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 '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)
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