

Autumn Term

Underlined = Y5 only

Strands Covered	Building Block	Y4 and <u>Y5</u> Key Objectives
Number and Place Value	Secure in recognising numbers and their place value. Able to recognise patterns with counting in 10s, 100s, 1000s. Secure understanding of number order.	Read, write and locate any 3-digit number on a landmarked line from 0-1000 and use this to locate 4-digit numbers on a landmarked line and use this to compare/order numbers. Round to ten, a hundred and a thousand. Understand the numbers of 1s, 10s, 100s, 1000s in a 4-digit no, and the use of zero as a place-holder. Add and subtract multiples of 1, 10, 100, 1000 without difficulty Solve number and practical problems involving place value Estimate and use inverse operations to check answers to a calculation. <u>Read, write and locate 5- and 6-digit numbers on a landmarked line; use this to compare/order numbers; recognise the value of each digit.</u> <u>Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.</u> <u>Count forwards or backwards in steps of powers of 10 for any given number < 1,000,000.</u> <u>Solve number problems and practical problems involving place value.</u> <u>Write decimal numbers as tenths, hundredths, thousandths, e.g. 0.71 as $\frac{71}{100}$, 0.327 as $\frac{327}{1000}$; relate thousandths to tenths and hundredths.</u> <u>Locate 2-place decimal numbers on a line and round them to the nearest tenth or whole number.</u> <u>Add 2-place decimal numbers mentally or using column addition.</u>
Addition and Subtraction	Secure in number bonds to 5, 10. Know addition and subtraction facts for each number to 20 Add and subtract numbers mentally, including 3 digit numbers and 1s, 10s or 100s.	Solve number and practical problems involving place value. Mentally add and subtract any pair of 2-digit numbers or 3-digit multiples of 10. Use column addition to add 3-digit and 4-digit numbers: first expanded, then compact method. Subtract numbers from 3-digit numbers using 'Frog'/counting up, e.g. 426-278, 321-87. Estimate and use inverse operations to check answers to a calculation. Add and subtract multiples of 1, 10, 100, 1000 without difficulty Use column subtraction to subtract 3 and 4-digit numbers: first expanded, then compact method. <u>Confidently add numbers with up to 4 or 5 digits using column addition, including adding 'piles' of numbers.</u> <u>Subtract larger numbers using expanded or compact column subtraction, or by counting up.</u> <u>Use rounding to check answers and determine levels of accuracy.</u> <u>Subtract 1- and 2-place decimal numbers by counting up, e.g. 6.2 - 3.5, 13.1 - 9.45.</u> <u>Add/subtract mentally with confidence, where numbers are less than 100 or the calculation relies upon simple addition/subtraction and place value.</u>
Multiplication and Division	Secure in grouping objects in equal amounts. Secure in counting	Know and recite times tables, including division facts, up to 12×12 ; multiply by 0 and multiply and divide by 1. Use known facts, place value, factors and commutativity to multiply and divide mentally, including multiplying three numbers together. Multiply 1-digit numbers by 2-digit or 'friendly' 3-digit numbers mentally or using grid method (i.e. using the distributive law). Know how to use 'efficient chunking' for division above the range of the

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	in 2s, 5s, 10s forwards and backwards. Recall and use multiplication and division facts for the 2, 5, 10, 3, 4 and 8 times tables.	tables facts, e.g. $84 \div 6 = ?$. Begin to extend this to 3-digit numbers. Solve single-step problems; begin to solve multi-step problems, including multiplication/division. <u>Know and recite all times tables including division facts; identify multiples and factors, including common factors of two numbers.</u> <u>Identify prime numbers up to 100 and know primes up to 19; understand the vocabulary of prime and composite numbers; identify prime factors.</u> <u>Perform divisions mentally within the range of tables using remainders, fractions and decimal equivalences, e.g. $68 \div 8 = 8 \text{ r}4$ or $8\frac{1}{2}$ or 8.5.</u> <u>Divide 2, 3, 4-digit numbers by 1-digit numbers above tables range; choose/use efficient methods; interpret remainders appropriately acc. to context.</u> <u>Solve problems involving multiplication and division, using knowledge of factors, multiples, squares and cubes.</u> <u>Multiply 2, 3, 4-digit numbers by numbers ≤ 26 using long or short multiplication or grid method; multiply 2-digit by 2-digit numbers using grid method.</u>
Time	Secure in telling the time Secure in reading timetables	Convert between units of time, analogue/digital times, and between 12-hour and 24-hour times. <u>Solve problems involving converting between units of time; use 12- and 24-hour times, find time intervals and tell the time with confidence.</u> <u>Complete, read and interpret information in tables, including timetables.</u>
Fractions	Add and subtract fractions Calculate fractions of amounts Work with equivalent fractions	Write the equivalent fraction for fractions with given denominators or numerators, e.g. $\frac{1}{2} \equiv \frac{?}{8}$; express a fraction in its simplest form, e.g. $\frac{6}{12} \equiv \frac{1}{2}$. Use times tables to find unit and non-unit fractions of amounts, e.g. $\frac{1}{6}$ of 48, $\frac{3}{8}$ of 64. Add and subtract fractions with the same denominator. <u>Identify, name, write equivalent fractions; express fractions in their simplest form, including tenths to fifths and hundredths to tenths, e.g. $\frac{40}{100} \equiv \frac{4}{10} \equiv \frac{2}{5}$.</u> <u>Compare and order fractions where the denominators are multiples of the same number.</u> <u>Recognise mixed numbers and improper fractions and convert from one to the other, writing mathematical statements.</u> <u>Add and subtract fractions where the denominators are multiples of the same number.</u>
Shape	Deepen understanding of 2D and 3D shapes	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify acute and obtuse angles, compare and order angles up to 180°. Identify lines of symmetry in 2-D shapes presented in different orientations; complete a simple symmetric figure with respect to one line of symmetry. <u>Identify 3-D shapes from 2-D representation</u> <u>Understand properties of rectangles and triangles; distinguish regular and irregular polygons, based on reasoning about equal sides/angles.</u>

Week	Class Objectives	Teaching Strategies
Week 1	Place Value - initial assessments; Place value in 4- and 5-digit numbers Place numbers on a line	Morning Work completed to reinforce. Use of manipulatives to support and reinforce.
Week 2	Place value addition; rounding Place numbers on lines; decimals	Use of manipulatives and images to support and reinforce Whole class problem solving opportunities - place value
Week 3	Addition and subtraction Column addition; mental subtraction	Use of manipulatives and jottings to support calculation.
Week 4	More addition/subtraction; choose strategies	
Week 5	Multiplication and division mental strategies	Use of jottings to support
Week 6	Tell the time; timetables Fractions of amounts	Y5 Bikeability Week - those more confident in time will have an accelerated lesson to check existing knowledge at the end of week 5 and consolidation lesson at the end of week 6. Use of clocks
Week 7	Equivalent fractions; +/- fractions	Fraction wall Linked times table practice
Week 8	Place value, deepen understanding Add/subtract powers of 10	Place value chart to support
Week 9	Subtraction strategies Add and subtract near multiples	Use of manipulatives/images to reinforce
Week 10	Mental addition and subtraction Consolidate written addition/subtraction strategies	Jottings to support
Week 11	Written methods - multiplication	Manipulatives to support Give children chance to reason, explain and fully understand the concept behind multiplication and division
Week 12	ASSESSMENT WEEK	NfER papers
Week 13	Written methods - division	Manipulatives to support Give children chance to reason, explain and fully understand the concept behind multiplication and division
Week 14	Shape - explore 2D Deepen understanding of 3D shapes	Link to real world
Vocabulary: partitioning, negative, rounding, estimation, inverse, greater, less, number bonds, million, hundred thousands, ten thousands, thousands, hundreds, tens, ones, place value, compare, order, exchange, factor, multiple, prime number, square number, cube number, perimeter, convert, length		