

YEAR 6 CURRICULUM COMPONENT MAP: MATHS

| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|--------|---|--|---|---|--|--|
| Week 1 | Place value, partitioning the number, number bonds to 10, 100 and 1000 and doubles | Equivalent fractions, matching fraction to image, multiplication and division, improper fractions to mixed numbers | Rounding, multiplying and dividing by 10, 100 and 1000, comparing 2 decimal place numbers, factors of a number | Numbers in a sequence, BIDMAS, improper fractions to mixed numbers, converting measures | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. |
| | Read, write and compare 6-digit numbers and 1-, 2- and 3-place decimal numbers; multiply and divide by 10, 100 and 1000; round decimals to nearest tenth and whole number and place on a number line; | Understand negative numbers; calculate small differences between negative numbers and negative and positive numbers; add and subtract negative numbers; compare fractions with unlike, but related, denominators; correctly use the terms fraction, denominator and numerator; understand what improper fractions and mixed numbers are and add fractions with the same denominator, writing the answer as a mixed number | Solve subtraction of 5- and 6-digit numbers using written column method (compact). | Solve addition and subtraction multi- step problems in shopping contexts, and add and subtract money using column addition and counting up; add and subtract decimal numbers choosing an appropriate strategy, and add decimal numbers with different numbers of places using column addition; use mathematical reasoning to investigate and solve problems, and solve subtractions of decimal numbers with different numbers of places (2- places) using counting up | Revision of place value in large numbers and in decimal fractions | Revision of equivalence in fractions, and using this to add, subtract, multiply and divide fractions and solving ration problems |
| Week 2 | Multiplying and dividing by 10, 100 and 1000. Rounding to the nearest 10, 100, 1000 and whole numbers | Dividing by 10 and 100, doubling and halving amounts, improper fraction conversion, BIDMAS | Common factors (factor bugs), equivalent fractions with decimals and percentages, percentages of amounts, | Subtracting decimal numbers, symmetry, unknown angles in triangles, multiplying decimals | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. |
| | Use mental addition strategies to solve additions including decimal numbers; use column addition to add 5-digit numbers, decimal numbers and amounts of money; solve problems involving number up to 3 decimal places | Use mental strategies to divide by 2, 4, 8, 5, 20 and 25; find non-unit fractions of amounts; use short division to divide 3- and 4-digit numbers by 1-digit numbers, including those which leave a remainder; express a remainder as a decimal, simplifying where possible. | Multiply and divide by 10, 100 and 1000; compare and order numbers with up to three decimal places; know common fraction / decimal equivalents; multiply pairs of unit fractions and multiply unit fractions by non-unit fractions | Calculate and understand the mean average; construct and interpret distance/time line graphs where intermediate points have meaning, including conversion line graphs; understand pie charts are a way of representing data using percentages, interpret and construct pie charts | Revision of: mental and written strategies in addition and subtraction; finding percentages; order of operations; and finding unknowns in equations. | Revision of properties of 2D shape, angle types, perimeter, area and volume, 24 hour clock time and intervals |
| Week 3 | Inverse triangles with numbers bonds, part-part whole models, bar models, adding three numbers, halving | Rounding to 10, 100 or 1000, dividing numbers with remainders, | Number bonds to 180 and 360, adding and subtracting decimals up to 3 decimal places, fractions of amounts | Sequencing using a formular, division using short division, multiplying 5 digit by 1 digit | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. |
| | Use mental addition, column subtraction and counting up to solve subtractions of amounts of money and word problems; | Add and subtract unit fractions with different denominators including mixed numbers; use mental strategies to find simple percentages of amounts, including money | Use partitioning to mentally multiply 2-digit numbers with one decimal place by whole 1-digit numbers; multiply numbers with two decimal places; use short multiplication to multiply amounts of money; use estimation to check answers to calculations; use long multiplication to multiply 3-digit and 4-digit numbers by numbers between 10 and 30. | Read and plot coordinates in all four quadrants, draw and translate simple polygons using coordinates and find missing coordinates for a vertex on a polygon; draw and reflect simple polygons in both the x-axis and y-axis using coordinates; find unknown angles around a point, on a line, in a triangle or vertically opposite and in polygons where diagonals intersect | Revision of written algorithms for multiplication and division and mental strategies including the use of factors; finding fractions of amounts and calculating the mean as an average | Exploration of a variety of interesting mathematical concepts and process, including binary numbers and Napier's bones; playing with numbers and discovering and solving patterns and puzzles |
| Week 4 | Indices, subtracting three numbers, multiplying and dividing by 10, 100 and 1000 decimals, number bonds to 60 | Simple percentages, add and subtract fractions, add and subtract decimals, indices (cubing) | Adding and subtracting fractions, multiplying amount of money, multiply and divide fractions (unit and non-unit), ordering numbers up to 6 digits | Rounding 3 decimal place numbers to the nearest tenth and whole number, ordering numbers up to 7 digits, number sequences and their rules | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. |





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| | Express missing number problems algebraically and find pairs of numbers that satisfy equations involving two unknowns; find missing lengths and angles; understand how brackets can be used in calculation problems; use knowledge of the order of operations to carry out calculations involving the four operations, solve addition and subtraction multi-step problems using knowledge of the order of operations. | Multiply fractions less than 1 by whole numbers, converting improper fractions to whole numbers; use commutativity to efficiently multiply fractions by whole numbers; divide unit and non-unit fractions by whole numbers; solve word problems involving fractions. | Name, classify and identify properties of quadrilaterals; explore how diagonal lines can bisect quadrilaterals; understand what an angle is and that it is measured in degrees; know what the angles of triangles, quadrilaterals, pentagons, hexagons and octagons add to and use these facts and mathematical reasoning to calculate missing angles; recognise and identify the properties of circles and name their parts; draw circles using pairs of compasses; draw polygons using a ruler and a protractor | Multiply 4-digit numbers including those with two decimal places by 1- digit numbers; use long multiplication to multiply 4-digit numbers by numbers between 10 and 30, including those with two decimal places; revise using short division to divide 4-digit by 1-digit and 2-digit numbers including those which leave a remainder, and divide the remainder by the divisor to give a fraction, simplifying where possible, and make approximations; use long division to divide 4-digit by 2- digit numbers, and use a systematic approach to solve problems | Revision of written algorithms for multiplication and division and mental strategies including the use of factors; finding fractions of amounts and calculating the mean as an average | Exploration of a variety of interesting mathematical concepts and process, including binary numbers and Napier's bones; playing with numbers and discovering and solving patterns and puzzles |
|--------|--|---|--|--|---|--|
| Week 5 | BIDMAS, telling the time, finding change Convert between grams and kilograms, millilitres and litres, millimetres and centimetres, centimetres and metres, metres and kilometres, and miles and kilometres; revise reading the 24-hour clock and convert 12-hour times to 24- hour; read and write Roman numerals; | Multiply and divide fractions, equivalent fractions, time intervals, multiplying 3 numbers Calculate the perimeter, area and volume of shapes, and know their units of measurement; understand that shapes can have the same perimeters but different areas and vice versa; calculate the area of a triangle using the formula $A = 1/2 b \times h$; find the area of parallelograms using the formula $A = b \times h$; name and describe properties of 3D shapes; systematically find and compare nets for different 3D shapes. | Prime, square and cube numbers, short division with remainders as decimals, Add and subtract numbers using mental strategies; solve addition of 4- to 7-digit numbers using written column addition; identify patterns in the number of steps required to generate palindromic numbers; solve subtraction of 5-, 6- and 7-digit numbers using written column method (decomposition); solve additions and subtractions choosing mental strategies or written procedures as appropriate; read, understand and solve word problems | Fractions on a number line, percentages on a number line, negative numbers Generalise a relationship between pairs of numbers, express simple formulae in words, then using letters; describe and continue sequences, generalise to predict the tenth term, begin to generalise a term in a sequence using <i>n</i> to stand for the number of the term in a sequence; describe ratio and use ratio to solve problems; find fractions and simplify ratios | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. Abacus planning and review of key curriculum objectives that require additional coverage, according to analysis of outcomes. | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. Financial planning |
| Week 6 | Revision converting 24 hour to 12 hour, converting measures Use mental multiplication strategies to multiply by numbers such as 4, 8, 5, 25, 19, 29 and 99; (one lesson) revise using short multiplication to multiply 4-digit numbers by 1-digit numbers and use this to multiply amounts of money; solve word problems involving multiplication including two-step problems and finding change; use long multiplication to multiply 3-digit and 4- digit numbers by teens numbers. | Multiplying and dividing fractions by whole numbers, measuring a straight line in cm and mm, order decimals up to 2 decimal places Place value: Read and write numbers with up to 7-digits, understanding what each digit represents, rounding numbers to the nearest 10, 100, 1000, 10000, problem solving with place value | Angles in a triangle, finding the area and perimeter, addition and subtraction word problems Identity common factors and common multiples; understand that a prime number has exactly two factors and find prime numbers less than 100; understand what a composite (non- prime) number is; use long division to divide 3- and 4-digit numbers by 2-digit numbers, giving remainders as a fraction, simplifying where possible | Converting measures, ratio, area of a triangle, quadrilateral and parallelogram Abacus planning and review of key curriculum objectives that require additional coverage, according to analysis of outcomes. | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. Abacus planning and review of key curriculum objectives that require additional coverage, according to analysis of outcomes. | Review of key curriculum objectives that require additional coverage, according to analysis of outcomes. Financial planning |

