| **MATHS** |  |  |  |  |  |  |
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| **Year 5** | **1. Place Value**  **2. Addition and subtraction**  **3. Multiplication and Division**  **4. Negative numbers** | **1. Multiplication and Division**  **2. Fractions** | **1. Fractions**  **2. FDP**  **3. Perimeter and area** | **1. Converting units**  **2. Shape**  **3. Volume** | **1. Position and direction** | **End of year Assessment** |
| Skills and Knowledge Assessed | 1. Read, write and compare whole number and decimals, up to 5 digits and 3 d.p  2. Count forward/ backward in powers of 10.  3. Round whole numbers and decimals to 1 d.p.  4. Use column addition and subtraction with whole numbers.  5. Use mental addition and subtraction, including fluency of number bonds, to solve problems.  6. Explore methods for formal multiplication: grid method, column method  7. Solve problems involving negative numbers | 1. Calculate with short division, one-digit divisor.  2. Recognise prime numbers and solve problems that include multiples, factors, primes and squares  3. Multiply/divide whole numbers and decimal numbers by 10/100/100  4. Explore what a fraction is, represent pictorially and abstractly.  5.. Create and recognise equivalent fractions. pictorially, and through multiplying or dividing  6. Order and compare fractions, especially through pictorial methods.  7. Fluently convert between improper fractions and mixed numbers.  8. Add and subtract with fractions, including finding common denominators. | 1. Multiply and divide fractions by integers  2. Convert between decimals and fractions.  3. Represent decimals as fractions (at least tenths)  4. Equivalent Fractions, Decimals and Percentages.  5. Solve problems using area and perimeter of rectangles, and compound shapes.  . | 1. Convert between metric measures including length, weight, and time.  2.Measure and draw angles with a protractor.  3. Classify angles and calculate angles around a point and on a straight line.  4. Calculate missing angles in shapes  5. Recognise properties of 2-D and 3-D shapes.  6. Identify volume and capacity | 1. Solve problems involving position on a grid and translation.  2. Solve problems using reflection and symmetry.  3. Use and interpret line graphs |  |
| **Year 6** | **1. Place Value**  **2. 4 Operations**  **3. Measures** | **1. Fractions**  **2. Fractions, decimals and percentages** | **1. Area and Perimeter**  **2. Shape**  **3. Position and Direction** | **1. Ratio & Proportion**  **2. Algebra**  **MOCK SATS week** | **1. SATs**  **2.Money & Finances** | **Year 7 Curriculum:**  **1.Sequences**  **2. Algebraic notation** |
| Skills and Knowledge Assessed | 1. Read, write and compare whole numbers, decimal numbers up to 8 digits and 3 d.p  2. Solve problems involving rounding of whole numbers and decimals.  3. Solve problems involving negative numbers  4. Solve problems using column addition and subtraction, including multi-step problems  5. Recognise prime numbers and solve problems that include multiples, factors, primes and squares  6. Consolidate preferred method of multiplication and solve problems.  7. Solve problems involving short division, including 2-digit divisors  8. Solve problems involving the order of operations (BIDMAS)  9. Solve problems requiring metric conversions. | 1. Recognise and calculate with equivalent fractions.  2. Compare and order fractions, using knowledge of equivalent fractions and common denominators.  3. Add and subtract fractions and mixed numbers.  4. Multiply and divide fractions: by whole numbers and by fractions.  5. Calculate fractions of an amount.  6. Calculate percentages of amounts  7. Solve problems using FDP equivalence, especially in a reasoning context | 1. Solve problems calculating area and perimeter – including area of a triangle.  2. Calculate volume of cuboids.  3. Identify nets of 3D shapes  4. Calculate missing angles on a straight line, around a point and within shapes such as triangles.  5. Draw shapes accurately including 3D nets.  6. Solve problems involving translation and reflection.  7. Read and interpret line graphs  8. Identify parts of a circle.  9. Draw and interpret pie charts    . | 1. Recognise ratios, simplify them, and divide quantities into a ratio.  2. Solve problems involving similar shapes and scale factors  3. Use substitution.  4. Satisfy an equation using reasoning and trial and improvement  5. Solve multi-step equations  MOCK SATs week with revision sessions.  . | REVISION WEEKS and SATs Tests.  Financial learning including:  1. Budgeting  2. Bills  3. Mortgages  4. Purchasing a home. | Beginning KS3 curriculum: Generate data, and then organise and analyse it to solve problems.  1. Describing and continuing sequences  2. Linear and non-linear sequences  3. Explaining term-to-term rules  4. Using function machines – both 1 and 2 step  5. Substituting values into 2 step expressions  6. Represent functions graphically. |
| **Year 7** | **1. Equality and Equivalence**  **2. Place Value and ordering integers and decimals**  **3. Addition and subtraction** | **1. Addition and subtraction**  **2. Multiplication and division**  **3. Area**  **3. FDP equivalence** | **1. Fractions & Percentages of amounts** | **1. Operations & equations with directed number**  **2. Addition and subtraction of fractions** | **1. Constructing, measuring and using geometric notation**  **2. Develop geometric reasoning** | **1. Sets and probability**  **2. Prime numbers and proof**  **End of year Assessment** |
| Skills and Knowledge Assessed | 1. Understand and use fact families, numerically and algebraically  2. Solve one-step linear equations involving +/- using inverse operations  3. Simplify algebraic expressions by collecting like terms, using the ≡ symbol  4. Recognise place value up to 1 billion  5. Round integers to nearest power of 10  6. Compare and order numbers to 1 billion.  7. Write positive integers in the form Ax10n (H)  8. Write decimals in the form Ax10n (H)  9. Use formal methods of addition and subtraction including decimals. | 1. Solve problems with frequency trees.  2. Solve problems with bar charts and line charts.  3. Add and subtract numbers given in standard form (H)  4. Use formal methods for multiplication and division including decimals.  5. Solve problems using the area of rectangles, triangles and trapezia.  6. Convert between fractions and decimals  7. Convert between fractions, decimals and percentages. | 1. Explore fractions above one, decimals and percentages (H)  2. Find fractions of given amounts  3. Find percentages using mental methods  4. Find percetages using a calculator  5. Solve problems with fractions greater than 1 and percentages greater than 100% (H) | 1. Understand and use representations of directed numbers  2. Add, subtract and multiply with directed numbers  3. Evaluate algebraic expressions with directed number  4. Use order of operations with directed numbers  5. Explore higher powers and roots (H)  6. Add and subtract fractions with same and different denominators.  7. Use fractions in algebraic contexts  8. Add and subtract simple algebraic fractions (H) | 1. Measure and draw angles up to 360 degrees.  2. Identify perpendicular and parallel lines  3. Recognise different types of triangles, quadrilaterals and other polygons up to a decagon.  4. Construct triangles  5. Draw pie charts  6. Understand the sum of angles on a line and around a point  7. Understand vertically opposite angles  8. Fine and use the angle sum in any polygon (H) | 1. Identify and represent sets  2. Understand and use the intersection of sets  3. Calculate probabilities of single events  4. Know that the sume of probabilities for all possible outcomes is 1.  5. Recognise and identify prime numbers  6. Recognise square and triangular numbers  7. Write numbers as a product of their prime factors.  8. Make and test conjectures. |
| **Year 8** | **Number** (Unit 1) Assessment; | **Area & Volume** (Unit 2)Assessment  **Statistics & Graphs** (Unit 3) Assessment | **Algebra** (Unit 4) Assessment)  **Real-life Graphs** (Unit 5)  Assessment; **Units 1-4** Assessment | **Decimals & Ratio** (Units 6) Assessment  **Lines and Angles** (Unit 7) Assessment | **Fractions** (Unit 8) Assessment  **Straight-line Graphs** (Unit 9) Assessment | **Fractions, Decimals and Percentages (**Unit 10) Assessment  **End of year** assessment |
| Skills and Knowledge Assessed | **Unit 1**  1. Use mental methods of doubling/halving and rounding/adjusting to multiply.  2. Solve problems using the rules of divisibility.  3. Apply knowledge of division to solve problems involving finances.  4. Calculate more complex problems with negative numbers, including multiplying and dividing.  5. Calculate squares and cubes and roots.  6. Use the priority of operations involves brackets, powers, roots and fractions.  7. Write numbers in index form.  8. Calculate with prime factor decomposition and use this to find HCF and LCM of two or more numbers. | **Unit 2**  1. Calculate the area of a triangle, parallelogram and trapezium.  2. Calculate volume of cubes and cuboids.  3. Recognise and name 3D shapes and use terminology to describe them.  4. Draw 3D shapes on isometric paper.  5. Recognise and draw plans and elevations.  6. Calculate the surface area of cubes and cuboids.  7. Solve problems using metric conversions, including square units for area.  8. Calculate conversions between metric and imperial units of measure  **Unit 3**  1. Draw and interpret pie charts.  2. Draw and interpret tables, and use charts and tables to compare data.  3. Draw and interpret stem and leaf diagrams.  4. Draw and interpret scatter graphs.  5. Interpret real life graphs including conversion graphs, D/T graphs, line graphs. | **Unit 4**  1. Understand and simplify algebraic powers. 2. Expand single brackets and then solve problems with multiple single brackets and negative numbers.  3. Write and simplify algebraic expressions involving the four operations.  4. Factorise expressions into a single bracket.  5. Solve one and two step equations, including using the balancing method.  6. Apply method of solving equations to contextual problems.  **Unit 5**  1. Use conversion graphs  2. Use distance time graphs  3. Construct and interpret line graphs  4. Solve problems involving real life graphs, | **Unit 6**  1. Round decimals to 3 decimal places and to a given number of significant figures.  2. Round numbers to an appropriate degree of accuracy.  3. Compare and order decimals.  4. Multiply and divide numbers by 0.1 and 0.01 and using this to estimate calculations.  5. Multiply and divide with decimal numbers.  6. Divide a decimal quantity, especially money, into a ratio of two or three parts.  7. Simplify ratios with decimal numbers and solve problems.  **Unit 7**  1. Recall properties of quadrilaterals, using this to classify shapes and solve problems.  2. Identify alternate and corresponding angles in parallel lines.  3. Understand what a proof is, in terms of solving problems with angles.  4. Calculate the sum of interior and exterior angles in a polygon. | **Unit 8**  1. Compare and order fractions.  2. Add/subtract fractions, finding common denominators first.  3. Multiply and divide with fractions.  4. Calculate with mixed numbers using all four operations.  **Unit 9**  1. Identify and calculate with direct proportion graphically.  2. Calculate gradients.  3. Recall the equation of straight-line graphs.  4. Plot straight-line graphs using the equation. | **Unit 10**  1. Identify equivalent fractions and decimals.  2. Recognise equivalent proportions  3. Write percentages  4. Calculate percentages of amounts. |