MATHS CURRICULUM

| Term |  | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 |
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| 1 | September October | Factors and highest common factors (HCF); <br> Multiples and lowest common multiples (LCM); <br> Prime factors; Sequences and rules; <br> Using the nth term to generate sequences; <br> Finding the nth term of a sequence; Area of rectangles, triangles, paralleograms, trapeziums \& compound shapes | Percentage increases and decreases; <br> Recognise/draw the graph of a linear equation; <br> Enlarging shapes; <br> Scatter graphs and correlation | Higher: <br> Multiples, factors and primes; calculating with fractions; percentage of amounts <br> Foundation: <br> Place value; BIDMAS; units of measurements | Higher: <br> Area and volume of similar shapes; rules of indices; standard form <br> Foundation: <br> Perimeter and area of shapes, compound shapes, compound shapes; trapeziums; circumference of a circle; area of a circle | Higher: <br> Negative/fractional powers; surds; bounds <br> Foundation: <br> Percentages; sampling; pie charts |
|  | November December | Averages (mode, mean, median) \& range; Statistical Diagrams <br> Equivalent Fractions; Fractions (add/subtract/multiply/divide); Adding and subtracting mixed numbers <br> BIDMAS; <br> Expressions and substitutions; Simplifying expressions | Expanding Brackets; <br> Adding and subtracting fractions; <br> Formula for the circumference <br> of a circle; <br> Formula for area of a circle; <br> Personal Finance Level 1 | Higher: <br> Averages <br> Sequences <br> Ratios and Proportions <br> Foundation: <br> Averages (mean/median/mode) Calculating the Range Angles around points Angles on straight lines \& parallel lines Multiples, Factors and Primes | Higher: <br> Calculating Probabilities <br> Mutually Exclusive/Exhaustive <br> Events <br> Two Way Tables <br> Venn Diagrams <br> Foundation: <br> Representing Vectors Adding and subtracting Vectors | Higher: <br> Factorising quadratics Solving quadratics by completing the square Solving quadratics by plotting the graph <br> Solving quadratics using the formula <br> Solving simultaneous equations (linear \& quadratic) <br> Foundation <br> Construction <br> Volume of 3D shapes |


| 2 | January February | Angles in a triangles and quadrilaterals <br> Angles formed by parallel lines Constructions <br> Rounding numbers Estimating answers Calcualting with decimals <br> Coordinates <br> Linear graphs | Equations with and without brackets <br> Rearranging formulae Distance-time graphs Direct proportion | Higher: <br> Compound measures <br> Angles in polygons <br> Scale drawings and Bearings <br> Foundation: <br> Use of calculator <br> Rounding <br> Multiplying and dividing <br> decimal numbers | Higher: <br> Solving linear equations Solving simultaneous equations by substitution Solving simultaneous equations by elimination <br> Foundation: <br> Rotational symmetry for 2 D shapes <br> Transformation Refelections/ Translation /Rotation/Enlargement | Higher: <br> Probability - Tree Diagrams Probability Dependent/Indepednent Circle Theorems Direct/Indirect Proportions <br> Foundation: <br> Pythagoras Thereom Trigonometry Sequences |
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|  | March - April | Fractions, decimals \& percentages <br> Fractions of a quantity Percentages of quantities Percentages with a calculator <br> Using net to construct 3D shapes Cuboid (Volume and Surface area ) | Angles in polygons Make accurate geometric constructions. Factorising algebraic expressions Comparing Data | Higher: <br> Transformation Refelections/ Translation /Rotation/Enlargement Factorising Quadratics Rearranging Equations <br> Foundation: <br> Fractions - add, subtract, multiply, divide Straight line graphs | Higher: <br> Representing Inequalities on the number Line Solving simple linear inequalities Graphical inequalities <br> Foundation: <br> Calculating probabilities Systematic listing and counting Mutually exclusive and exhaustive outcomes | Higher: <br> Velocity time graphs Basic trigonometry Sine/Cosine Rule <br> Foundation <br> Congruent \& similar shapes Probability (Two-way tables) Probability (Venn diagrams) Indices |
| 3 | May - June | Ratios (simplifying and sharing ) <br> Application of ratio in real life Symmetry(reflection and rotation) <br> Properties of 2 D shapes <br> Solving equations (finding unknown numbers) Solving more complex equations Setting up and solving equations | Volume and surface area of prisms <br> Understand and use formula for calculating speed and density <br> Understand and use of pythagoras' theorem | Higher: <br> Circumference and area of circles <br> Area of volume of shapes Straight line graphs <br> Foundation: <br> Substitution <br> Expanding and simplifying single brackets <br> Expanding and simplifying doube brackets <br> Factorising simple and quadratic expressions | Higher: <br> Calculating and manipulating surds <br> Rationalising the denominator <br> Error interval <br> Limits of accruacy <br> Surds <br> Foundation: <br> Volume \& surface area of prisms <br> Volume and surface area of a cylinder <br> Solving linear equations | Higher <br> Algebraic fractions <br> Changing subject of formulae <br> Functions <br> Iteratative process <br> Vectors <br> Foundation: <br> Standard form <br> Simultaneous equations (linear) <br> Distance/velocity-time graphs Quadratics; plotting, factorising and solving |


| June - July | Short/long multiplication and division <br> Pie Chart ( interpreting and drawing ) <br> Rounding <br> Standard form | Rounding to significant figures Rounding to decimal places Expanding and simplifying two brackets <br> Understand and work with standard form <br> Using positive and negative powers of ten | Higher: <br> Equations of parallel and perpendicular lines <br> Pythagoras theorem <br> Trigonometry (SOHCAHTOA) <br> Foundation: <br> Rearranging equations <br> Ratio (simplify, share) <br> Direct proportion problems | Higher: <br> Quadratic equations Factorising \& solving Plotting quadratic graphs <br> Foundation: <br> Ration and proportion Compound measures Percentage increase and decrease Compound interest and repeated percentages |  |
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| Additional reading | Collins KS3 Maths Now: Learn and Practice Book | Collins KS3 Math Now- Learn and Practice Book | Collins Edexcel GCSE Maths Higher Collins Edexcel GCSE Maths Foundation | Collins Edexcel GCSE Maths Higher Collins Edexcel GCSE Maths Foundation <br> Pearson Statistics Student Book 9-1 <br> Further Maths Book: Set 1 AQA level 2 certificate in Further Mathermatics | Collins Edexcel GCSE Maths Higher Colling Edexcel GCSE Maths Foundation <br> Pearson Staistics Student Book 9-1 |
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| Useful websites / links | Sparx Maths My Maths | Sparx Maths <br> My Maths <br> Personal Finance - Level 1 | Sparx Maths <br> My Maths <br> Maths Genie <br> CorbettMaths | Sparx Maths <br> My Maths <br> Maths Genie <br> CorbettMaths | Sparx Maths <br> My Maths <br> Maths Genie <br> CorbettMaths |

