



Network School KS4 Long Term Curriculum Plan – June 2020

Subject - Mathematics				
Year Group	Term 1 (Aug – Oct)	Term 2 (Oct – Dec)	Term 3 (Jan – Mar)	Term 4 Mar – Jun)
Year 10	<p>Unit 1</p> <p>1 – Reviewing number concepts</p> <p>1.1 Different types of numbers</p> <p>1.2 Multiples and factors</p> <p>1.3 Prime numbers</p> <p>1.4 Powers and roots</p> <p>1.5 Working with directed numbers</p> <p>1.6 Order of operations</p> <p>1.7 Rounding numbers</p> <p>2 – Making sense of algebra</p> <p>2.1 using letters to represent unknown values</p> <p>2.2 Substitution</p> <p>2.3 Simplifying expressions</p> <p>2.4 Working with brackets</p> <p>2.5 Indices</p> <p>3 – Lines, angles and shapes</p> <p>3.1 Lines and angles</p> <p>3.2 Triangles</p> <p>3.3 Quadrilaterals</p> <p>3.4 Polygons</p> <p>3.5 Circles</p> <p>3.6 Construction</p>	<p>Unit 2</p> <p>5 – Fractions</p> <p>5.1 Equivalent fractions</p> <p>5.2 Operations on fractions</p> <p>5.3 Percentages</p> <p>5.4 Standard form</p> <p>5.5 Your calculator and standard form</p> <p>5.6 Estimation</p> <p>6 – Equations and transforming formulae</p> <p>6.1 further expansions of brackets</p> <p>6.2 Derive and solve linear equations</p> <p>6.3 Factorising algebraic expressions</p> <p>6.4 Transformation of a formula</p> <p>7 – Perimeter, area and volume</p> <p>7.1 Perimeter and area in two dimensions</p> <p>7.2 Three-dimensional objects</p> <p>7.3 Surface areas and volumes of solids</p>	<p>Unit 3</p> <p>9 – Sequences and sets</p> <p>9.1 Sequences</p> <p>9.2 Rational and irrational numbers</p> <p>9.3 Sets</p> <p>10 - Straight lines and quadratic equations</p> <p>10.1 Straight lines</p> <p>10.2 Derive and solve quadratic equations by factorising.</p> <p>11 - Pythagoras' theorem and similar shapes</p> <p>10.2 Pythagoras' theorem</p> <p>11.2 Understanding similar triangles</p> <p>11.3 Understanding similar shapes</p> <p>11.4 Understanding congruence</p> <p>12 – Averages and measures of spread</p> <p>12.1 Different types of average</p>	<p>Unit 4</p> <p>13 – Understanding measures</p> <p>13.1 Understanding units</p> <p>13.2 Time</p> <p>13.3 Upper and lower bounds</p> <p>13.4 Conversion graphs</p> <p>13.5 More money</p> <p>14 – Further solving of equations and inequalities</p> <p>14.1 Derive and solve simultaneous linear equations.</p> <p>14.2 Derive and solve linear inequalities.</p> <p>14.3 Regions in a plane</p> <p>14.4 Linear programming</p> <p>14.5 Derive and solve by completing the square</p> <p>14.6 Derive and solve by using quadratic formula</p> <p>14.7 Factorising quadratics where the coefficient for x^2 is not 1</p> <p>14.8 Algebraic fractions</p>



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	<p>4 – Collecting, organising and displaying data</p> <p>4.1 Collecting and classifying data</p> <p>4.2 Organising data</p> <p>4.3 Using charts to display data</p>	<p>8 – Introduction to probability</p> <p>8.1 Basic probability</p> <p>8.2 Theoretical probability</p> <p>8.3 The probability that an event does not happen</p> <p>8.4 Possibility diagrams</p> <p>8.5 Combining independent and mutually exclusive events</p>	<p>12.2 making comparisons using averages and ranges</p> <p>12.3 Calculating averages and ranges for frequency data</p> <p>12.4 Calculating averages and ranges for grouped continuous data</p> <p>12.5 percentiles and quartiles</p>	<p>15 Scale drawing, bearings and trigonometry</p> <p>15.1 Scale drawing</p> <p>15.2 Bearings</p> <p>15.3 Understanding the tangent, cosine and sine ratios</p> <p>15.4 Solving problems using trigonometry.</p> <p>15.5 Recognise, sketch and interpret graphs of simple trigonometric functions. Graph and know the properties of trigonometric functions</p> <p>Solve simple trigonometric equations for values between 0° and 360°</p> <p>15.6 The sine and cosine rules</p> <p>15.7 Area of a triangle</p> <p>15.8 Trigonometry in three dimensions</p> <p>16 – Scatter diagrams and correlation</p> <p>16.1 Introduction to bivariate data</p>
Year 11	<p>Unit 5</p> <p>17 – Managing money</p> <p>17.1 Earning money</p>	<p>Unit 6</p> <p>21 – Ratio, rate and proportion</p>	<p>Exam practice</p> <p>1 Structured questions for units 4 to 6.</p>	<p>Study leave and IGCSE exam</p>



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	<p>17.2 Borrowing and investing money 17.3 Buying and selling</p> <p>18 – Curved graphs 18.1 Plotting quadratic graphs (the parabola) 18.2 Plotting reciprocal graphs (the hyperbola) 18.3 Using graphs to solve quadratic equations 18.4 using graphs to solve simultaneous linear and non-linear equations 18.5 Derive and solve simultaneous involving one linear and one quadratic. 18.6 other non-linear graphs 18.7 Estimate gradients of curves by drawing tangents. 18.8 Recognise, sketch and interpret graphs of functions. 18.9 Understand the idea of a derived function Use the derivatives of functions of the form ax^n, and simple sums of not more than three of these Apply differentiation to gradients and turning points(stationary points) Discriminate between maxima</p>	<p>21.1 Working with ratio 21.2 Ratio and scale 21.3 Rates 21.4 Kinematic graphs 21.5 Proportion 21.6 Direct and inverse proportion in algebraic terms 21.7 Increasing and decreasing amounts by a given ratio</p> <p>22 – More equations, formulae and functions 22.1 Setting up equations to solve problems 22.2 Using and transforming formulae 22.3 Functions and function notation</p> <p>23 – Transformations and Vectors 23.1 Simple plane transformations 23.2 Vectors 23.3 Calculate the magnitude of a vector 23.4 Express given vectors in terms of two coplanar vectors 23.5 Position vector</p> <p>24 – Probability using tree</p>	<p>2 Past papers 3 Mock exam 4 Test corrections 5 More revision in preparation for exams.</p>	
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