Blue Coat
Church of England Academy

Year: 11	Subject: Mathematics

Overview

At the start of Y11, pupils focus on key Foundation/Higher tier areas. During half-term 2, pupils complete their first set of mock exams (three maths papers) and are provided with a RAG grid to act as a personalised learning checklist. Lessons are then planned in accordance to areas of improvement as identified in the mocks. After Christmas, students complete fortnightly short assessments to develop exam skills and techniques. In half-term 4, pupils complete their second set of mock exams and again are provided with a RAG grid of question-by-question analysis. In the build up to the summer exams, pupils then focus on these areas for development with a large focus on exam practice. Pupils have access to the MathsWatch VLE site to assist with independent learning, homework and revision, having their own individual logins for this.

Edexcel Foundation Tier Checklist (Grades 1 – 5)

Geometry and Measures	Algebra	Statistics	Ratio, Proportion and Rates of Change	Number	Probability
Arc lengths and sectors Derive triangle results Enlargements and negative SF Loci Pythagoras Similarity and Congruence Standard constructions Surface Area Trigonometric ratios Volume Alternate and corresponding angles Area of a circle Areas of composite shapes Areas of triangles, trapezia and parallelograms Bearings Circle terminology Circumference of a circle Congruent triangles Enlargements and fractional SF Perimeter of 2D shapes Plans and elevations Polygons Solve geometrical problems Vector arithmetic Volume of prisms 3-D Shapes Congruent and similar shapes Geometrical terminology and diagrams Measuring lines and angles Properties of quadrilaterals Properties of triangles Translations and vectors Using standard units	Algebraic terminology Cubic and Reciprocal graphs Deduce quadratic roots algebraically Derive an equation Equation of a line Expand the product of two binomials Factorising quadratic expressions Fibonacci, quadratic and simple geometric sequences Graphical solution to equations Inequalities on number lines Linear equations Quadratic graphs Reciprocal real-life graphs Simplify indices Simplify surds Solve linear inequalities in one variable Writing formulae and expressions Changing the subject Collecting like terms Expressions Factorise single bracket Finding the equation of a line Graphs of linear functions Graphs of quadratic functions Linear equations one unknown Multiplying single brackets Non-standard real life graphs nth term of a linear sequence Number machines Substitution Using "y = mx + c" Coordinates in four quadrants Plotting straight line graphs Position to term rules Sequences of square, triangular and cube numbers Using Formulae Sequences and Rules	Histograms with equal class widths Scatter graphs Comparing data using graphs Comparing Distributions Correlation Population Sampling Scatter Diagrams Time series Charts and Diagrams Pie Charts Types of data Vertical Line Charts	Compound Units Gradient & the rate of change Growth and decay Interpret Proportion Percentage change Problems with compound units Scale factors and similarity Simple Interest and Financial Maths Solve Proportion Problems Compare Fractions, Decimals and Percentages Compare lengths, area, volume Comparing quantities as a ratio Division of a quantity as a ratio Express one quantity as a % of another Percentage change Problems involving ratio Proportion and ratio Ratio and fractions Ratio Sharing Convert standard units Express one quantity as a fraction of another Use ratio notation Use scale factors, diagrams and maps	Calculating with fractions Error intervals Index Laws Limits of accuracy Adding and subtracting fractions Checking calculations Compound measures Converting metric units Estimation Fractions and percentages Fractions and ratio problems Interpret calculator displays LCM and HCF Multiples and factors Multiplying fractions Operations Order of operations Powers Rounding Standard Form Terminating decimals and fractions Decimals Listing outcomes Prime numbers Using standard units Add and Subtract integers Dividing integers Multiplying integers Ordering numbers Place value	Probability of dependent events Probability of independent events Mutually exclusive sum Relative Frequency Tables and Grids Theoretical Probability Unbiased Samples Venn Diagrams Frequency Trees Probability of equally likely outcomes

Edexcel Higher Tier Checklist (Grades 4 – 9)

Geometry and Measures	Algebra	Statistics	Ratio, Proportion and Rates of Change	Number	Probability
Circle theorems Vector arguments and proof Area of a triangle Cosine Rule Pythagoras and trig 2D and 3D Sine Rule Combined transformations Congruence and Similarity Standard trigonometric ratios Arc lengths and sectors Derive triangle results Enlargements and negative SF Loci Pythagoras Similarity and Congruence Standard constructions Surface Area Trigonometric ratios Volume Alternate and corresponding angles Area of a circle Areas of composite shapes Areas of triangles, trapezia and parallelograms Bearings Circle terminology Circumference of a circle Congruent triangles Enlargements and fractional SF Perimeter of 2D shapes Plans and elevations Polygons Solve geometrical problems Vector arithmetic Volume of prisms	Approximate solutions to equations using iteration. Equation of a circle Equation of a tangent Algebra and Proof Gradients and area under a graph Graphs of trigonometric functions Quadratic equations (completing the square) Composite functions Expand the product of two or more binomials Factorising difficult quadratic expressions Geometric Sequences Graphs of exponential functions Quadratic equations (needing re-arrangement) Quadratic equations (quadratic formula) Real-life exponential graphs Represent quadratic inequalities Simultaneous equations (non-linear) Solve quadratic inequalities Translations and reflections of a function Turning points & completing the square Algebraic fractions Identifying parallel lines Inverse functions Linear inequalities in two variables nth term of a quadratic sequence Quadratic equations (factorisation) Quadratic equations (graphical methods) Represent linear inequalities Simultaneous equations (linear) Algebraic argument Algebraic terminology Cubic and Reciprocal graphs Deduce quadratic roots algebraically Derive an equation Equation of a line Expand the product of two binomials Factorising quadratic expressions	Boxplots Cumulative frequency Histograms with unequal class widths Quartiles and Interquartile Range Histograms with equal class widths Scatter graphs Comparing data using graphs Comparing Distributions Correlation Population Sampling Scatter Diagrams Time series	Gradients and the rate of change General iterative processes Direct and inverse proportion Compound Units Gradient & the rate of change Growth and decay Interpret Proportion Percentage change Problems with compound units Scale factors and similarity Simple Interest and Financial Maths Solve Proportion Problems Compare Fractions, Decimals and Percentages Compare lengths, area, volume Comparing quantities as a ratio Division of a quantity as a ratio Express one quantity as a % of another Percentage change Problems involving ratio Proportion and ratio Ratio and fractions Ratio Sharing	Surds Index Laws (negative and fractional) Product rule Recurring Decimals Upper and lower bounds Finance 1 Powers and Roots Product of prime factors Using Pi Calculating with fractions Error intervals Index Laws Limits of accuracy Adding and subtracting fractions Checking calculations Compound measures Converting metric units Estimation Fractions and percentages Fractions and ratio problems Interpret calculator displays LCM and HCF Multiples and factors Multiplying fractions Operations Order of operations Powers Rounding Standard Form Terminating decimals and fractions	Conditional Probability Probability of dependent events Probability of independent events Mutually exclusive sum Relative Frequency Tables and Grids Theoretical Probability Unbiased Samples Venn Diagrams

	Fibonacci, quadratic and simple geometric sequences Graphical solution to equations Inequalities on number lines Linear equations Quadratic graphs Reciprocal real-life graphs Simplify indices Simplify surds Solve linear inequalities in one variable Writing formulae and expressions Changing the subject Collecting like terms Expressions Factorise single bracket Finding the equation of a line Graphs of linear functions Graphs of quadratic functions Linear equations one unknown Multiplying single brackets Non-standard real-life graphs nth term of a linear sequence Number machines Substitution Using "y = mx + c"				

Further exam board information and guidance can be gained from:
https://qualifications.pearson.com/content/dam/pdf/GCSE/mathematics/2015/specification-and-sample-assesment/gcse-maths-2015-specification.pdf