Half Term 1	Unit 1 Place value, decimals and using scales. • Place values integers and decimals up to 1 million. • Ordering Decimals • Multiply and divide integers by powers of 10. • Metric units for length and mass including decimal quantities including measuring lengths practically. • Applying place value to understanding and constructing scale drawings including ratio to express scale. Unit 2 Factors, Multiples and Primes. HCF and LCM. • Multiplicative Number Bonds • What is a factor? • What is a multiple? • What is a prime number? • Concept of common multiples and common factors. • HCF and their application. • LCM and their application. Unit 3 Four operations with integers and decimals. • Number bonds – Numbers within numbers • 4 operations with integers and decimals.
Half Term 2	Unit 4 Understanding fractions • What is a fraction • Equivalent fractions • Fraction and decimal equivalence • Expressing one amount as a fraction of another. • Fraction of an amount Unit 5 Four operations with fractions • Simplifying fractions • Addition of fractions including mixed numbers • Subtraction of fractions including mixed numbers • Multiplication of an integer by a fraction/mixed number • Multiplication of two fractions including mixed numbers • Division of fractions including mixed numbers
Half Term 3	Unit 6 Compare and order fractions, decimals and integers. • Ordering decimals • Using maths symbols • Ordering fractions • Ordering integers

	• Representing inequalities on number lines • Ordering integers, fractions and decimals Unit 7 Solving equations • Number bonds and inverse operations • Solve one step equations • Solve two step equations • Solving with x on both sides of the equation Unit 8 Presenting and interpreting data • Interpreting diagrams that represent data • Creating bar charts • Averages • Drawing pie charts • Averages from frequency tables • Problem solving with averages
Half Term 4	Unit 9 Perimeter • Recap of 2D shapes and units of measure • Perimeter of rectangles, rectilinear shapes and circles • Problem solving with perimeter Unit 10 Area and Perimeter • Perimeter and area of rectangles and rectilinear shapes. • Area of parallelograms, triangles, trapeziums, kites • Problem solving with area
Half Term 5	Unit 11 Sequences • Adding and subtracting negatives • What is a sequence • Sequences in pictorial form • Finding missing terms • Nth term and using nth term • Special sequences Unit 12 Properties of shapes • Measuring and Estimating angles • Parallel lines • Reflection and lines of symmetry • Rotation and rotation symmetry • Using symbols and letters to show properties of shapes

	• Properties of regular shapes and circles
Half Term 6	Unit 13 Angle Properties • Angles around a point • Angles on a line • Angles in a triangle • Angles in a quadrilateral • Polygons and their angles Unit 14 Parallel lines and angles • Parallel and perpendicular lines • Vertically opposite angles • Corresponding angles • Alternate angles • Co-interior angles • Further problems with parallel lines Unit 15 Co-ordinates and transformations • Plotting and reading co-ordinates • Translations, Rotations, Reflections • Describing transformations • Combined transformations

Year 8

	Delta KS3 Year 8 MASTERY Scheme of Work
Half Term 1	Unit 1 Understanding Percentages • Comparing and Ordering Fractions and Decimals • Equivalent Fractions, Decimals and Percentages • One amount as a Percentage of another • Ordering FDP • Decimals bigger than 1 as a Percentage • Change as a Percentage Unit 2 Fractions and Percentages as Operators • Fractions of amounts • Percentages of amounts • Percentage Increase and Decrease

	• Reverse Percentages Unit 3 Ratio • Writing using ratios • Simplifying Ratios • Sharing in given ratios
Half Term 2	Unit 3 Ratio • Solving problems with Fractions, Percentages and Ratios Unit 4 Powers and Roots • Recap Factors – numbers with an odd number of factors • Calculating with squares and cubes • Solving problems involving squares and cubes, linking to area and volume • Product of prime factors • Understanding and calculating with indices greater than 3 • Understanding and using negative indices Unit 5 Order of Operations • Understanding the four operations • Perform the four operations with negative numbers • Correctly apply the order of operations including indices and brackets • Substitute into given formula
Half Term 3	Unit 6 Simplifying and Manipulating Algebra • Understand the meaning of Identity • Identify Identities, Formula, Equations and Expressions • Simplify by collecting like terms • Expand single brackets in a given expression • Fully Factorise a given expression into a single bracket Unit 7 Plotting and Interpreting Graphs • Plot Vertical and Horizontal line and link to their equations • Plot a linear graph by completing a table of values • Understand graphs in the form y=mx+c identifying gradient and intercept. • Plot simple quadratic graphs • Plot multiple graphs in order to solve equations

	Unit 8 Introducing Probability • Describe probability in words • Describe Probability in numbers • Calculate expectation using probability • Calculate relative frequency from data
Half Term 4	Unit 8 Introducing Probability • Use 'Sum', 'Not' and 'Or' rules for probability Unit 9 Circles and Compound Area • Identify parts of a circle • Derive and use are a of a circle formula • Solve problems involving circle area and circumference • Calculate for compound shapes involving circles • Calculate arc length and sector area for fractions of circles Unit 10 3D Shapes, Capacity and Volume • Identify faces, edges and vertices of a 3D shape • Calculate volume of a prism • Work backwards from a volume to find other dimensions • Solve problems involving the volume of a prisms • Calculate the volume of compound prisms
Half Term 5	Unit 11 Proportion • Unit Ratios • Simplifying and combining ratios • Unitary method for proportion problems • Solving map and scale problems • Solving exchange rate problems • Solving recipe problems Unit 12 Constructions • Perform simple constructions • Solve loci problems by combining constructions • Construct triangles Unit 13 Similarity and Congruence • Perform and Describe Translations, Reflections and Rotations • Perform and Describe Enlargements

Half Term 6	Unit 13 • Understand the terms congruent and similar • Solve problems involving congruency and similarity • Find lengths, areas and volumes in similar shapes • Prove congruency in triangles Unit 14 Applied Graphs • Understand the equation y=mx+c • Use conversion graphs • Link graphs in context to the equation y=mx+c • Solve problems in context using linear graphs • Solve linear simultaneous equations graphically Unit 15 Further Probability • Use two way tables and Frequency Trees to calculate probabilities • Represent overlapping events in a Venn diagram • Calculate probabilities from a Venn diagram • Use the 'Or' rule for non-mutually exclusive events

Year 9

	Route 1
Half Term 1	Unit 1 Number • Integers and Place Value • Decimals • Indices, Powers and Roots • Factors, Multiples and Primes Unit 2 Algebra • Algebra basics • Expressions • Substitution into formulae
Half Term 2	Unit 7 Data Handling • Sampling • Statistics

	Unit 6 Geometry • Properties of shape • Parallel lines and Angle Facts
Half Term 3	Unit 6 Geometry • Interior and Exterior Angles of Polygons Unit 16 Algebra • Quadratics – expanding and factorising • Quadratic Equations • Quadratic Graphs
Half Term 4	Unit 4 Number • Fractions, Decimals and Percentages
Half Term 5	Unit 11 Number • Ratio • Proportion Unit 3 Data Handling • Tables, charts and graphs • Pie Charts • Scatter Graphs
Half Term 6	Unit 3 Data Handling • Tables • Charts and graphs • Pie charts • Scatter diagrams
	Edexcel GCSE Mathematics HIGHER Tier
Half Term 1	Unit 1 • Calculations, checking and rounding

	• Indices, roots, reciprocals and hierarchy of operations • Factors, multiples and primes • Standard form • Surds Unit 2 • Rearranging and solving equations • Factorising • Functions
Half Term 2	Unit 2 • Sequences Unit 3 • Averages and Range • Representing and Interpreting Data • Scatter Graphs
Half Term 3	Unit 5 • Polygons, angles and parallel lines • Pythagoras Theorem • Trigonometry Unit 9 • Solving quadratics • Simultaneous equations • Inequalities • Iteration
Half Term 4	Unit 4 • Fraction, Decimals and Percentages • Ratio and Proportion
Half Term 5	Unit 16 • Circle theorems • Circle geometry

	Unit 14 • Collecting Data • Cumulative frequency • Box plots • Histograms Unit 15 • Quadratics • Expanding more than two brackets
Half Term 6	Unit 15 • Sketching graphs

Year 10

	Edexcel GCSE Mathematics FOUNDATION Tier
Half Term 1	Unit 12 • Right-angled triangles: Pythagoras and trigonometry Unit 14 • Multiplicative reasoning: more percentages • Rates of change • Compound measures
Half Term 2	Unit 10 • Transformations Unit 15 • Constructions: triangles, nets • Plan and elevation • Loci • Scale drawings and bearings

Half Term 3	Unit 13 • Probability Unit 5 • Equations • Inequalities
Half Term 4	Unit 5 • Sequences Unit 18 • More fractions • Reciprocals • Standard form • Zero and negative indices Unit 8 • Perimeter • Area
Half Term 5	Unit 8 • Volume 1 Unit 17 • Perimeter • Area (circles)
Half Term 6	Unit 17 • Volume 2: circles, cylinders, cones and spheres
	Edexcel GCSE Mathematics HIGHER Tier
Half Term 1	Unit 17 • Changing the subject of formulae (more complex)

	• Algebraic fractions • Solving equations arising from algebraic fractions • Rationalising surds • Proof Unit 11 • Multiplicative reasoning: direct and inverse proportion, relating to graph form for direct • Compound measures • Repeated proportional change
Half Term 2	Unit 8 • Transformations • Constructions: triangles, nets • Plan and elevation, • Loci • Scale drawings • Bearings Unit 10 • Probability
Half Term 3	Unit 13 • Sine and cosine rules • ab sin C • Trigonometry and Pythagoras' Theorem in 3D • Trigonometric graphs • Accuracy and bounds Unit 7 • Perimeter, area and circles • 3D forms and volume, cylinders, cones and spheres
Half Term 4	Unit 7 • Accuracy and bounds Unit 6 • Real-life and algebraic linear graphs • Quadratic and cubic graphs

	• The equation of a circle
Half Term 5	Unit 6 • Rates of change • Area under graphs made from straight lines
Half Term 6	Unit 12 • Similarity and congruence in 2D and 3D

Year 11

	Edexcel GCSE Mathematics FOUNDATION Tier
Half Term 1	Unit 9 • Real-life and algebraic linear graphs Unit 19 • Congruence • Similarity • Vectors Unit 20 • Rearranging equations • Graphs of cubic and reciprocal functions
Half Term 2	Unit 20 • Simultaneous equations Revision / personalised learning from QLA
Half Term 3	Revision / personalised learning from QLA

Half Term 4	Revision / personalised learning from QLA
Half Term 5	Revision / personalised learning from QLA
	Edexcel GCSE Mathematics HIGHER Tier
Half Term 1	Unit 18 • Vectors • Geometric proof Unit 19 • Direct and indirect proportion: using statements of proportionality • Reciprocal and exponential graph • Rates of change in graphs
Half Term 2	Unit 19 • Functions • Transformations of graphs
Half Term 3	Revision / personalised learning from QLA
Half Term 4	Revision / personalised learning from QLA
Half Term 5	Revision / personalised learning from QLA

Exam board used:	Edexcel
Useful websites:	www.hegartymaths.com https://www.bbc.com/bitesize/examspecs/z9p3mnb
Useful texts:	REVISE Edexcel GCSE (9-1) Mathematics Higher/Foundation Revision Guide