

Maths Curriculum Map for KS3

Stage	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Stage 7 – Year 7 Core and Year 8 Support	<p><u>Number and the number system – Multiples, factors and primes.</u> <u>Powers and roots</u> ((Lowest) common multiple and LCM, ((Highest) common) factor and HCF, Power, (Square and cube) root, Triangular number, Square number, Cube number, Prime number, Linear sequence Progress Test 1</p> <p><u>Calculating – Working with decimals and the order of operations</u> Improper fraction, Top-heavy fraction, Mixed number, Operation, Inverse, Long multiplication, Short division, Long division, Remainder, Progress Test 2</p>	<p><u>Checking approximating and estimating</u> Approximate (noun and verb), Round, Decimal place, Check, Solution, Answer, Estimate (noun and verb), Order of magnitude, Accurate, Accuracy, Significant figure, Cancel, Inverse Operation <u>Pattern spotting</u> Pattern, Sequence, Linear, Term, Term-to-term rule, Ascending, Descending, <u>Algebraic Proficiency - Collecting like terms, expanding brackets and substitution</u> Algebra, Expression, Term, Formula (formulae), Equation, Function, Variable, Mapping diagram, Input, Output Represent, Substitute Evaluate, Like terms, Simplify / Collect Progress Test 3 Progress Test 4 Progress Test 5</p>	<p><u>Solving Equations</u> Algebra, algebraic, algebraically, Unknown, Equation, Operation, Solve, Solution, Brackets Symbol, Substitute Progress Test 6</p> <p><u>Proportional reasoning - Ratios</u> Ratio, Proportion, Compare, comparison Part, Simplify, Common factor, Cancel, Lowest terms, Unit Progress Test 7</p> <p><u>Exploring FDP</u> Fraction, Improper fraction, Proper fraction, Vulgar fraction, Top-heavy fraction, Percentage, Proportion, Numerator, Denominator</p>	<p><u>Calculating FDP</u> Mixed number, Equivalent fraction, Simplify, cancel, lowest terms, Proper fraction, improper fraction, top-heavy fraction, vulgar fraction, Percent, percentage, Multiplier, Increase, decrease Progress Test 8 and 9</p> <p><u>Measuring space</u> Length, distance, Mass, weight, Volume, Capacity Metre, centimetre, millimetre, Tonne, kilogram, gram, milligram Litre, millilitre, Hour, minute, second, Inch, foot, yard, Pound, ounce Pint, gallon, Line segment</p> <p><u>Visualising and Constructing</u> Edge, Face, Vertex (Vertices), Plane, Parallel Perpendicular, Regular polygon, Rotational symmetry, Angle, Degrees Right angle, Acute angle Obtuse angle, Reflex angle, Protractor, Vertically opposite, Geometry, geometrical. Progress Test 10</p>	<p><u>Investigating properties of Shape</u> Face, Edge, Vertex (Vertices), Cube, Cuboid, Prism, Cylinder, Pyramid, Cone, Sphere, Quadrilateral, Square, Rectangle, Parallelogram, (Isosceles) Trapezium, Kite, Rhombus, Delta, Arrowhead, Diagonal, Perpendicular, Parallel, Triangle, Scalene, Right-angled, Isosceles, Equilateral</p> <p><u>Calculating Space</u> Perimeter, area, volume, capacity, surface area Square, rectangle, parallelogram, triangle, trapezium (trapezia) Polygon, Cube, cuboid Square millimetre, square centimetre, square metre, square kilometre, Cubic centimetre, centimetre cube, Formula, formulae, Length, breadth, depth, height, width Progress Test 11</p>	<p><u>Mathematical Movement</u> (Cartesian) coordinates, Axis, axes, x-axis, y-axis Origin, Quadrant, Translation, Reflection, Rotation, Transformation, Object, Image, Congruent, congruence, Mirror line Vector, Centre of rotation Progress Test 12</p> <p><u>Presenting Data</u> Data, Categorical data, Discrete data, Pictogram, Symbol, Key, Frequency, Table, Frequency table, Tally, Bar chart, Time graph, Time series, Bar-line graph, Vertical line chart, Scale, Graph Axis, axes, Line graph Pie chart, Sector, Angle, Maximum, minimum</p> <p><u>Measuring data - Averages</u> Average, Spread, Consistency, Mean, Median, Mode, Range Measure, Data, Statistic Statistics, Approximate, Round Progress Test 13</p>

Stage 8 – Year 7 Challenge, Year 8 Core and Year 9 support

Stage	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p><u>Calculating with negative numbers</u> Negative number, Directed number, Improper fraction, Top-heavy fraction, Mixed number, Operation, Inverse, Long multiplication, Short division, Power, Indices, Roots Progress Test 1</p> <p><u>Numbers and the number system – Prime factor form and standard form</u> Prime, Prime factor, Prime factorisation, Product, Venn diagram, Highest common factor, Lowest common multiple, Standard form, Significant figure Progress Test 2</p>	<p><u>Algebraic Proficiency Indices and factorising</u> Product, Variable, Term, Coefficient, Common factor, Factorise, Power, Indices Progress Test 3 and 4</p> <p><u>Exploring FDP</u> Fraction, Mixed number, Top-heavy fraction, Percentage, Decimal, Proportion, Terminating, Recurring, Simplify, Cancel Progress Test 5</p> <p><u>Understanding Risk</u> Probability, Theoretical probability, Event, Outcome, Impossible, Unlikely, Evens chance, Likely, Certain, Equally likely, Mutually exclusive, Exhaustive, Possibility space, Experiment, Outcome, Event, Experiment, Combined experiment, Frequency tree, Enumerate Set, Venn diagram, Possibility space, sample space Progress Test 6</p>	<p><u>Solving equations with unknowns on both sides – Rearranging Formulae</u> Algebra, algebraic, algebraically, Unknown, Equation, Operation, Solve, Solution, Brackets, Symbol, Substitute, Graph, Point of intersection, Formula, Formulae, Subject, Change the subject Progress Test 7 and 8</p> <p><u>Investigating angles – Parallel lines</u> Degrees, Right angle, acute, angle, obtuse angle, reflex angle, Vertically opposite, Geometry, geometrical, Parallel, Alternate angles, corresponding angles, Interior angle, exterior angle, Regular polygon</p>	<p><u>Pattern spotting – Nth term of liner sequences</u> Sequence, Linear, Term, Difference, Term-to-term rule, Position-to-term rule, Ascending, Descending Progress Test 9</p> <p><u>Algebraic proficiency – Linear graphs/ Quadratic graphs and Real life graphs</u> Plot, Equation (of a graph), Function, Formula, Linear, Coordinate plane, Gradient, y-intercept, Substitute, Quadratic, Piece-wise linear, Model, Kinematic, Speed, Distance Progress Test 10</p>	<p><u>Proportional reasoning</u> Ratio, Proportion, Proportional, Multiplier, Speed, Unitary method, Units, Compound unit, Progress Test 11</p> <p><u>Calculating FDP – Reverse percentages</u> Proper fraction, improper fraction, mixed number Simplify, cancel, lowest terms, Percent, percentage Percentage change, Original amount, Multiplier (Simple) interest, Exact Progress Test 12</p> <p><u>Calculating Space – Area and circumference of a circle</u> Circle, Centre, Radius, diameter, chord, circumference Pi, (Right) prism, Cross-section, Cylinder, Polygon, polygonal, Solid Progress Test 13</p>	<p><u>Measuring Data – Averages from grouped data</u> Average, Spread, Consistency, Mean, Median, Mode, Range, Statistic, Statistics, Approximate, Round, Calculate an estimate, Grouped frequency, Midpoint, <u>Presentation of Data</u> Categorical data, Discrete data, Continuous data, Grouped data, Table, Frequency table, frequency, Histogram, Scale, Graph, Axis, axes Scatter graph (scatter diagram, scattergram, scatter plot), Bivariate data, (Linear) Correlation Positive correlation, Negative correlation <u>Visualising and Constructing – Enlargement and scale drawing, Plans and elevations</u> Similar, Similarity, Enlarge, enlargement, Scaling Scale factor, Centre of enlargement, Object Image, Scale drawing Bearing, Plan, Elevation</p>

Stage 9 – Year 8 Challenge, Year 9 Core

Stage	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p><u>Numbers and the number system – calculating with Standard form – Accuracy and Bounds</u> Power, Root, Index, Indices Standard form, Inequality, Truncate, Round, Minimum, Maximum Interval, Decimal place Significant figure Progress Test 1 and 2 <u>Pattern Spotting – Fibonacci and quadratic sequences</u> Term, Term-to-term rule, Position-to-term rule, nth term, Generate, Linear Quadratic, First (second) difference, Fibonacci number, Fibonacci sequence</p>	<p><u>Algebraic Tinkering – Expanding and factorising quadratics</u> Progress Test 3 and 4 Inequality, Identity, Equivalent, Equation, Formula, Formulae, Expression, Expand, Linear Quadratic <u>Solving Inequalities</u> Progress Test 5 (Linear) inequality, Unknown, Manipulate Solve, Solution set, Integer</p>	<p><u>Proportional reasoning - Direct and inverse proportion, Congruence and similarity, compound units.</u> Direct proportion, Inverse proportion, Multiplier, Linear, Congruent, Congruence, Similar, Similarity, Compound unit Density, Population density Pressure, Congruent, congruence, Similar (shapes), similarity, Hypotenuse Progress Test 6 and 7 <u>Calculating space – Accurate calculations and Pythagoras’ Theorem</u> Circle, Pi, Radius, diameter, chord, circumference, arc, tangent, sector, segment (Right) prism, cylinder, Cross-section, Hypotenuse Pythagoras’ theorem Progress Test 8 and 9</p>	<p><u>Algebraic proficiency – Visualising – Gradient, quadratic graphs and Kinematics</u> Function, equation Linear, non-linear Quadratic, cubic, reciprocal Parabola, Asymptote Gradient, y-intercept, x-intercept, root Rate of change Sketch, plot Kinematic Speed, distance, time Acceleration, deceleration Progress Test 10 and 11</p>	<p><u>Solving Simultaneous Equations</u> Equation, Simultaneous equation, Variable, Manipulate, Eliminate Solve, Derive, Interpret Progress Test 12 <u>Understanding risk – Frequency Trees and Tree Diagrams</u> Outcome, equally likely outcomes, Event, independent event, dependent event, Tree diagrams, Theoretical probability, Experimental probability, Random Bias, unbiased, fair Relative frequency, Enumerate, Set Progress Test 13</p>	<p><u>Visualising and Constructing – Constructions and Loci</u> Compasses, Arc, Line segment, Perpendicular Bisect, Perpendicular bisector, Locus, Loci Plan, Elevation <u>Presentation of Data – Correlation and Causation, Time series graphs</u> categorical data, Discrete data, Continuous data, Grouped data, Axis, axes Time series, Compound bar chart, Scatter graph (scatter diagram, scattergram, scatter plot) Bivariate data, (Linear) Correlation, Positive correlation, Negative correlation, Line of best fit Interpolate, Extrapolate Trend</p>