Core Aim

Our core aim is to support our students in their pursuit of knowledge and wisdom, allowing them to flourish as lifelong learners seeking to love God and serve the community.

Curriculum Vision

Regardless of prior attainment or circumstances, all students at St Peter's have equal access to a broad curriculum that is knowledge-rich, inclusive and ambitious. Our curriculum will give students the knowledge, skills and experiences to gain qualifications and the social and cultural capital necessary to flourish both individually and in society. Our curriculum should be a joyful experience for students stimulating a life-long love of learning.

Curriculum Plans & Progress Ladders

This document provides an overview of the topics students will study in each curriculum area, along with information on how their progress will be assessed. In Key Stage 3, each department has set the expected standards for students to achieve by the end of the year or the Key Stage. These standards are detailed as progress ladders, explaining what students should have secured at each step and what they can do to further progress. These are broad statements written to summarise the knowledge and skills a student will have acquired at each stage of their learning. Students will be assessed regularly during their learning and departments may use more specific criteria when designing assessments. This document should be read alongside your child's progress report to help you understand their current level of attainment in each subject.

St Peter's Collegiate Academy

Yr 7 Mathematics Curriculum

At St Peter's we believe that a broad and balanced curriculum with a strong academic core is a right for all pupils. We seek to encourage pupils to explore subjects of interest around their in-school learning and to enhance their curriculum experience through enrichment.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question
- Number Essentials - Shape: Area and Perimeter	- Number Essentials - Statistics	- Algebra introduction - Fractions - Angles	- Coordinate geometry - Fractions, decimals and percentages - Probability	- Equations - Symmetry and transformations - Data Interpretation	- Data Interpretation - Ratio introduction - 3D Geometry - Number properties
Knowledge	Knowledge	Knowledge	Knowledge	Knowledge	Knowledge
- Numerical calculation - Number in the context of real life - Negative numbers - Perimeter, area and volume introduction - Properties of number	- Rounding - Sequences - Unit conversion - BIDMAS - Collecting data - Averages - Algebraic expressions	- Algebraic formulae - Fraction calculations - Angle properties	- Coordinates and graphs - Fractions, decimals and percentages - Probabilities of single events	- Solving equations - Symmetry - Transformations - Charts and diagrams - Comparing data with averages	- Comparing data with averages - Ratio - 3D shapes - Common Factors and Multiples
Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge
Numerical calculation - I can add and subtract integers and decimals using appropriate written methods - I can multiply and divide integers and decimals using appropriate written methods Number in the context of real life - I can use the 24 hour and 12 hour clock interchangeably in context - I can use money in real life context - I can use timetables - I can use distance tables - I can use bank statements Negative numbers - I can use a number line to	Sequences - I can use function machines to generate inputs and outputs - I can recognise the rules of one or multi-step function machines - I can uses term-to-term rules with sequences - I can find the nth term of a sequence - I can use the nth term to find terms of a sequence - I can recognise other sequences such as the Fibonacci sequence] Unit conversion - I can multiply and divide by powers of 10 - I can convert between common metric units BIDMAS	Algebraic formulae - I can substitute numbers into expressions - I can understand what a formula is - I can use a formula to find out unknown values - I can write a basic algebraic formula Fraction calculations - I can find equivalent fractions - I can write fractions in their simplest form - I can compare and order fractions - I can add or subtract fractions with different denominators - I can convert from improper fractions to mixed numbers and vice versa Angle properties	Coordinates and graphs - I can locate coordinates in all four quadrants - I can recognise and draw horizontal and vertical lines on axes - I can recognise and draw lines of the form y=ax - I can recognise and draw lines of the form x+y=a Fractions, decimals and percentages - I can convert between fractions, decimals and percentages interchangeably - I can find fractions of a quantity - I can find percentages of a quantity - I can use a calculator to find fractions or percentages of amounts	Solving equations - I can find missing numbers in simple calculations - I can recognise an equation - I can solve a one-step equation - I can solve a multi-step equation Symmetry - I can recognise, identify and draw lines of symmetry - I can recognise and identify the order of rotational symmetry Transformations - I can reflect a shape in a horizontal or vertical line - I can reflect a shape in a diagonal line - I can rotate a shape	Data comparison - I can compare data sets using averages and the range - I can compare data sets using charts and diagrams Ratio - I can use ratio notation correctly - I can simplify ratios - I can use ratios to find missing parts or totals - I can share in a ratio - I can convert between ratios and fractions 3D Shapes - I can identify 3D shapes and their properties - I can draw nets and construct 3D shapes - I can draw 3D shapes using isometric

understand negative numbers - I can use inequality symbols correctly - I can order negative numbers - I can add and subtract with negative numbers - I can multiply and divide with negative numbers Properties of number - I can recognise square numbers and square roots - I can recognise cube numbers and cube roots Rounding - I can round numbers to a given number of decimal places - I can round numbers to a given number of significant figures Perimeter, area and volume - I can find the perimeter of any 2D and compound shapes - I can find the area of rectangles, triangles, parallelograms and trapezia - I can find areas/perimeters of compound shapes - I can find the volume of a cuboid	- I can use BIDMAS correctly in calculations Collecting data and Averages - I can collect data using a tally chart - I understand how to use frequency tables, including grouped frequency tables - I can calculate the mean, median and mode of a set of data - I can calculate the range of a set of data - I can draw and interpret pictograms and simple bar charts Algebraic expressions - I can use algebraic notation to write expressions - I can recognise the terminology used in algebra - I can simplify expressions	- I can measure and draw angles - I can calculate angles at a point, on a straight line - I can recognise opposite angles - I can recall and use the angle sum of a triangle and quadrilateral	Probabilities of single events - I can use probability terminology - I can label and use a probability scale with fractions or decimals - I can find probabilities where there are equally likely outcomes - I can find probabilities from experiments (relative frequency) - I can understand the difference between experimental and theoretical probability	Charts and diagrams - I can draw comparative bar charts - I can draw composite bar charts - I can draw pie charts - I can interpret any bar or pie chart	paper - I can draw and recognise 2D views of 3D shapes - I can find the relationship between faces, edges and vertices for the platonic solids Common factors and multiples - I can identify prime numbers - I can find products of prime factors of an integer - I can find the highest common factor of two numbers - I can find the lowest common multiple of two numbers
Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary
Integer, credit, debit, inequality, area, volume	Term, Sequence, data, frequency, average, range, expression	Formula, improper fraction, mixed numbers, parallel	Axes, Origin, percentage, Probability, outcomes	Solve, Equation, Reflect, rotate, pie chart	Ratio, Prism, net, prime, factor, multiple
Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)
Baseline Year 7 assessment (taken week beginning 11th September) In class test on recent content (week beginning 16th October)	In class test on recent content (week beginning 20th November)	In class test on recent content (week beginning 22nd January)	Non-calculator single lesson assessment on all topics covered this year (week beginning 19th February)	In class test on recent content (week beginning 15th April)	In class test on recent content (week beginning 17th June)

St Peter's Collegiate Academy

Yr 7 Mathematics Progress Ladder

At St Peter's we believe that a broad and balanced curriculum with a strong academic core is a right for all pupils. We seek to encourage pupils to explore subjects of interest around their in-school learning and to enhance their curriculum experience through enrichment.

	Number I can.....	Algebra I can.....	Ratio and Proportion I can.....	Probability and Statistics I can.....	Geometry and Measure I can.....
Mastering	effectively recall and apply my knowledge of all the content below achieving over 90% in assessments.				
Advancing	effectively recall and apply the vast majority of the content taught, achieving an average score between 70 and 89% in assessments In addition to *Securing,* students show an excellent understanding of:				
	Rounding and approximation with significant figures, Mixed number calculation, Standard form, Bank statements, Factors, multiples and primes, HCF and LCM	Solving linear equations, Using and manipulating algebraic formulae	Using proportion in real life problems where the multiplier is non-integer, Best buys, Solving ratio problems where given a part another part or total needs to be found	Constructing pie charts, Averages from frequency tables, Comparing data sets using averages	2-D representation of 3-D shapes, Coordinates problems, Surface area and volume of cuboids, Calculate the area of compound shapes, Reflection with diagonal lines of symmetry
Securing	effectively recall and apply the majority of the content taught, achieving an average score between 50 and 69% in assessments In addition to *Developing,* students show a good understanding of:				
	Rounding numbers to Decimal Places, Decimal calculation (divide only by integer), Inequality symbols, Negative number calculations Products of prime factors Squares and roots (first 15), Money problems (calc and non calc), Fractions equivalence, Order of operations	Simplifying expressions, Substituting numbers into simple formulae, Solving simple linear equations, Simple formulae expressed in words/ letters, Sequences, Special sequences, (such as Fibonacci)	Percentages of amount with a calculator, Sharing in a ratio, Convert between ratios and fractions, Convert from percentages to fractions or decimals Use the unitary method of proportion	Construct different types of bar chart, Interpreting pie charts, Relative frequency Experimental probability and theoretical probability, Compare two or more data sets using diagrams	Geometric notation, Area of 2D shapes, Rotational symmetry, Properties of triangles and quadrilaterals, Volume of cuboids, Converting between units, 3D shapes and their properties, Measuring and drawing angles, Nets of solids, Reflecting shapes in horizontal or vertical lines
Developing	effectively recall and apply the some of the content taught, achieving an average score between 30 and 49% in assessments In addition to *Emerging,* students show a good understanding of:				
	Multiplying and dividing by powers of ten, Ordering decimals,	Solve single step linear equations, Use algebraic notation, Collect simple like terms,	Simplify ratios, Using proportion in problems with an integer multiplier or halving,	Probability of an event (standard setup - coin, die etc.), Constructing bar charts	Metric measurements Coordinates in all 4 quadrants Finding angles Parallel lines

	Rounding numbers (nearest whole, 10, 100 or 1000), Reading of timetables, Place value to add/subtract using mental and written methods with decimals, Place value to multiply and divide with written methods, Negative numbers	Use a function machine, and in reverse	Calculate fractions of given amounts, Find a range of percentages of amounts including 25%, 75% or multiples of 10%	Writing probabilities in fractions form, Find mode, median, range, mean from lists, Interpret or create a frequency table	Reading scales that require working out Identifying all types of angles Identifying symmetry Calculate the perimeter of shapes
Emerging	recall sections of the year 7 content, achieving an average score up to 29% in assessments An emerging student will have a basic understanding of:				

St Peter's Collegiate Academy

Yr 8 Mathematics Curriculum

At St Peter's we believe that a broad and balanced curriculum with a strong academic core is a right for all pupils. We seek to encourage pupils to explore subjects of interest around their in-school learning and to enhance their curriculum experience through enrichment.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question
Fractions revision Percentages Algebraic manipulation Sequences	Probability Area and Volume Angles Geometry and Constructions	Graphs Standard form Data	Algebra The Circle	Ratio Fractions and decimals Proportion Equations	Data Right angled triangles Transformations Congruence and Scaling
Knowledge	Knowledge	Knowledge	Knowledge	Knowledge	Knowledge
Fraction and mixed number calculations Finding percentages and working with percentage change Algebra: brackets focus The nth term and special sequences	Probability experiments Surface area and Volume of prisms Angles revision Bearings introduction Geometry of 2D shapes Compass Constructions	Straight line graphs focus Standard form conversions Interpreting data	Algebra: rearranging and factorising The Circle	Ratio: application Fractions and decimals Proportion Equations	Grouped data and comparisons Pythagoras' theorem introduction Transformations Trigonometry introduction Congruence and Scaling
Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge

Fraction and mixed number calculations - I can order and compare fractions - I can convert between improper fractions and mixed numbers - I can add, subtract mixed numbers - I can multiply fractions **Finding percentages and working with percentage change** - I can write one quantity as a percentage of another - I can use percentages to compare quantities - I can use a multiplier to calculate a percentage change - I can identify the percentage change that has occurred **Algebra: brackets focus** - I can simplify expressions - I can expand single brackets and simplify - I can expanding double brackets **The nth term and special sequences** - I can find the nth term of a linear sequence - I can use the nth term to find unknown values in a sequence - I can use correct terminology for different types of sequence	**Probability experiments** -I can use a probability scale with fractions - I can recognise mutually exclusive events - I can use sample space diagrams - I can use relative frequency to estimate probabilities **Surface area and Volume of prisms** - I can find the area of 2D shapes - I can find the surface area of cubes and cuboids - I can find the volume of any prism - I can find the surface area of prisms **Angles revision and Bearings introduction** - I can use basic angles rules - I can understand the compass directions - I can use and interpret 3 figure bearings - I can use angles in parallel lines rules **Geometry of 2D shapes** - I can recall geometric properties of quadrilaterals **Compass Constructions** - I can construct the perpendicular bisector of a line - I can construct an angle bisector	**Straight line graphs focus** - I can draw the graphs of horizontal and vertical lines - I can draw the graphs of linear equations - I can find the gradient of a graph - I can work out the equation of a graph in y=mx+c form - I can recognise and draw a graph of a quadratic equation - I can draw real life graphs **Standard form conversions** - I can multiply and divide effectively by powers of 10 - I can write large numbers in standard form - I can write small numbers in standard form - I can multiply with numbers in standard form **Interpreting data** - I can construct pie charts - I can interpret pie charts - I can construct scatter graphs - I can interpret scatter graphs and use a line of best fit to make predictions - I can explain the correlation shown by a scatter graph - I can understand the difference between interpolation and extrapolation	**Algebra: rearranging and factorising** - I can change the subject of an equation with one step - I can change the subject of an equation with two or more steps - I can manipulate expressions containing different indices - I can factorise into single brackets **The Circle** - I can define the different parts of a circle - I can understand that pi is the relationship between the diameter and the circumference of a circle - I can calculate the circumference of a circle - I can calculate the area of a circle - I can calculate the volume of a cylinder	**Ratio: application** - I can divide quantities into given ratios - I can use ratios to find missing parts or wholes **Fractions and decimals** - I can multiply and divide fractions by an integer - I can divide an integer by a unit fraction - I can multiply or divide combinations of large and small decimal numbers - I can multiply and divide mixed numbers together **Proportion** - I can understand direct proportion - I can identify direct proportion from a graph - I can use conversion graphs - I can understand inverse proportion - I can identify inverse proportion from a graph - solve problems involving direct or inverse proportion **Equations** - I can solve equations involving more than one step - I can solve equations involving brackets on one side - I can solve equations when the letter is on both sides of the equation	**Grouped data and comparisons** - I can create a grouped frequency table - I can interpret frequency diagrams - I can draw frequency diagrams from grouped frequency tables - I can find the mode and range from frequency tables - I can find the mean and median from frequency tables - I can compare data using averages from frequency tables **Pythagoras' theorem introduction** - I can understand pythagoras' theorem and the hypotenuse - I can find an unknown hypotenuse - I can find an unknown smaller side **Transformations** - I can translate shapes on the coordinate grid - I can reflect shapes in axes on the coordinate grid - I can rotate shapes centre the origin on the coordinate grid - I can enlarge shapes **Trigonometry introduction** - I can identify when to use SOHCAHTOA in right angle triangles - I can find missing angles in right angled triangles - I can find missing sides in right-angled triangles **Congruence and Scaling** - I can recognise congruence - I can identify congruent triangles - I can use scale factors to recognise enlargements - I can scale up or down using ratios
Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary
Multiplier, expand, arithmetic, geometric	**Mutually exclusive, relative frequency, construct, perpendicular, bisector**	**Gradient, intercept, linear, standard form, correlation**	**Factorise, circumference, diameter, radius**	**Proportion, inverse (proportion), inverse (equations), variable**	**Hypotenuse, square (& square root), enlargement, translation, congruent**
Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)

Non-calculator assessment (taken week beginning 18th September)	**In class test on recent content (week beginning 13th November)**	**In class test on recent content (week beginning 29th January)**	**In class test on recent content (week beginning 18th March)**	**In class test on recent content (week beginning 13th May)**	**In class test on recent content (week beginning 8th July)**

St Peter's Collegiate Academy

Yr 8 Mathematics Progress Ladder

At St Peter's we believe that a broad and balanced curriculum with a strong academic core is a right for all pupils. We seek to encourage pupils to explore subjects of interest around their in-school learning and to enhance their curriculum experience through enrichment.

	Number I can.....	Algebra I can.....	Ratio and Proportion I can.....	Probability and Statistics I can.....	Geometry and Measure I can.....
Mastering	effectively recall and apply my knowledge of all the content below typically achieving over 90% in assessments, solving problems that are unfamiliar and may require inference.				
Advancing	effectively recall and apply the vast majority of the content taught, achieving an average score between 70 and 89% in assessments In addition to *Securing,* students show an excellent understanding of:				
	Mixed number division and multiplication, Standard form calculations, Significant figures	Expanding double brackets, Equation of a line, Changing the subject of a formula, Solving linear equations with unknowns on both sides, Factorising quadratics, Draw graphs of simple quadratics	Solving multi step ratio problems (often cross topic), Algebraic representations of direct and inverse proportion Multipliers to solve changing value problems	Interpolation and extrapolation Best average	Trigonometry, Pythagoras theorem – finding any side, 3-figure bearings and parallel lines, Surface area of a cylinder
Securing	effectively recall and apply the majority of the content taught, achieving an average score between 50 and 69% in assessments In addition to *Developing,* students show a good understanding of:				
	Mixed number addition and subtraction, Multiplying/Dividing fractions by integers, Standard form convert to and back to ordinary form, Standard form calculations with a calculator	Expand and simplify expressions, Factorising into single brackets, Solving linear equations with brackets, Nth term of sequences, Find the gradient of lines, Drawing real life line graphs	Inverse proportion graphs and problems, Direct proportion graphs and problems, Comparisons using percentages, Multipliers to carry out percentage changes, Find the percentage change of a change in value, Map ratios and scale drawing	Sample spaces for combined events, Pie charts, Scatter graphs – correlation, Averages from frequency tables, Comparing data sets using averages, Frequency diagrams,	Pythagoras theorem – finding hypotenuse, Surface area of cuboids, Volume of prisms, Bearings from a north line, Angles in parallel lines, Properties of quadrilaterals, Compass constructions, Circle area and circumference, Volume of a cylinder, Translations using column vectors, Transformations on coordinate axes, Congruent triangles
Developing	effectively recall and apply the some of the content taught, achieving an average score between 30 and 49% in assessments In addition to *Emerging,* students show a good understanding of:				

	Write large or small numbers in standard form Multiplying/Dividing large and small numbers without a calculator	Identifying different types of sequence, Expanding brackets with multiple variables, Simplifying expressions involving several variables and indices, Linear equations with two or more steps, Fibonacci sequences, Draw graphs of linear equations	Sharing in multi part ratios and finding unknowns, Conversion graphs, Meaning of inverse proportion, Writing one quantity as a percentage of another, Basic percentage change	Mutually exclusive events, Relative frequency, Scatter graphs plotting and line of best fit, Grouped frequency tables	Compass points, Angle rules, Parts of a circle, Rotating shapes, Translating shapes, Enlarging shapes, Congruence
Emerging	recall sections of the year 8 content, achieving an average score up to 29% in assessments An emerging student will have a basic understanding of:				
	Multiplying and dividing by powers of ten,	Expand a single bracket in one variable Simplifying expressions, Substitute values into expressions, Basic linear equations	Ratio simplifying and sharing into two parts, Meaning of direct proportion, Percentages of any amount	Probability scale, Find mode, median, range, mean from lists, Frequency tables	Area of 2D shapes, Volume of basic prisms, Drawing and measuring angles, Reflecting shapes

St Peter's Collegiate Academy

Yr 9 Mathematics Curriculum

At St Peter's we believe that a broad and balanced curriculum with a strong academic core is a right for all pupils. We seek to encourage pupils to explore subjects of interest around their in-school learning and to enhance their curriculum experience through enrichment.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question	Unit of Work/Big Question
Factors and Multiples Transformations Algebra Angles Shape Properties	Decimals Rounding Perimeter and Area Percentages	Ratio and proportion Probability Equations and Formulae	Right angled triangles Laws of indices	Standard form Volume Venn diagrams Graphs Data	Simultaneous equations Scatter graphs Probability trees 2D and 3D geometry
Knowledge	Knowledge	Knowledge	Knowledge	Knowledge	Knowledge
Factors and Multiples Transformations: extended Algebraic manipulation Angles strengthen Properties of polygons	Decimals Extend Rounding Extend Perimeter and Area Strengthen Circles Extend Percentages Strengthen	Ratio Strengthen Direct and Inverse Proportion Strengthen Probability Extend Equations and Formulae Strengthen	Pythagoras' theorem Strengthen Basic Trigonometry Laws of Indices	Standard Form Calculations Volume Extend Venn diagrams Graphs Strengthen Data Interpretation	Simultaneous equations Introduction Scatter graphs Strengthen Probability trees Introduction 2D and 3D geometry
Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge	Skills & Procedural Knowledge
Factors and Multiples - I can recognise primes and find the product of prime factors - I can find the Highest Common Factor of a number - I can find the Lowest Common Multiple of a number Transformations: extended - I can translate shapes using column vectors - I can reflect shapes in named lines on coordinate axes - I can rotate shapes about any point - I can enlarge shapes from a given centre of enlargement - I can recognise transformations Algebraic manipulation - I can articulate the meanings of algebraic terminology	Decimals Extend - I can apply the multiplication and division written methods to decimals - I can work interchangeably with terminating decimals and their equivalent fractions Rounding Extend - I can round numbers to any given number of decimal places or significant figures - I can approximate answers through rounding to 1sf - I can understand basic error intervals Perimeter and Area Strengthen - I can identify correct geometrical terminology in 2D and 3D shapes - I can find the area and perimeter	Ratio Strengthen - I can find parts or wholes in ratio problems - I can solve real life ratio problems Direct and Inverse Proportion Strengthen - I can solve direct and inverse proportion problems - I can recognise graphs of direct and inverse proportion - I can represent direct proportional relationships as equations - I can find missing values in proportional tables Probability Extend - I can use two way tables to find probabilities - I can use and create frequency trees to find probabilities	Pythagoras' theorem Strengthen - I can identify the hypotenuse and label right angle triangles to use Pythagoras' theorem - I can find missing hypotenuse sides in right angled triangles - I can find smaller sides in right angled triangles using Pythagoras' theorem Basic Trigonometry - I can label triangles and identify the correct ratios to use SOHCAHTOA - I can find missing sides in right angled triangles using trigonometry - I can find missing angles in right angled triangles using trigonometry - I have begun to learn trig exact values for sine and cosine.	Standard Form Calculations - I can multiply or divide with numbers in standard form with or without a calculator - I can add and subtract with numbers in standard form Volume Extend - I can find the volume of any prism - I can find the volume of cones - I can find the volume of pyramids - I can find the volume of spheres Venn diagrams - I can understand set notation and correctly categorise data in a venn diagram - I can find probabilities from venn diagrams	Simultaneous equations Introduction - I can turn basic problems into equations in two variables - I can solve simultaneous equations in two variables graphically and algebraically - I can understand the geometrical significance of simultaneous equations Scatter graphs Strengthen - I can interpret correlation in scatter graphs - I can make predictions on scatter graphs using lines of best fit - I can recognise that correlation does not always mean close relationships between variables

- I can expand brackets and simplify - I can expand double brackets and simplify Angles strengthen - I can use correct conventions when labelling angles and lines - I can construct diagrams accurately - I can use all angle rules learnt in contextual problems including those involving bearings Properties of polygons - I can identify the interior angle sum of any sided polygon - I can solve interior and exterior angle problems - I can identify geometric properties of special quadrilaterals, including "diagonals"	of composite 2D shapes Circles Extend - I can recall and apply the area and circumference of circles formulae - I can find the area and perimeter of composite shapes involving circles or parts of circles Percentages Strengthen - I can solve percentage change problems by seeing them as decimals or fractions of amounts - I can write one quantity as a percentage of another - I can calculate with percentages greater than 100% - I can use multipliers	- I can list outcomes or tabulate them and understand exhaustive outcomes sum to 1 Equations and Formulae Strengthen - I can substitute numbers into algebraic formulae effectively - I can solve any linear equations	Laws of Indices - I can recognise and calculate with positive powers - I can use all the index laws effectively with both numbers and algebraic terms with integer powers	Graphs Strengthen - I can plot straight line graphs - I can identify gradients and intercepts of straight line graphs both graphically and algebraically - I can use y=mx+c to identify parallel lines Data Interpretation - I can interpret a range of graphs and diagrams - I can use vertical line graphs and find averages from them - I can draw and interpret time series graphs	Probability trees Introduction - I can add or multiply probabilities in "or" and "and" problems - I can label probability trees for combined independent events - I can find the probabilities of combined events by using a probability tree 2D and 3D geometry - I can draw 2D views of 3D shapes - I can identify 2D views of 3D shapes - I can draw 3D shapes (sketched or isometrically) using multiple 2D representations
Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary	Tier 3 Subject Vocabulary
Product, vector, identity, bearing, polygon, exterior angle	Estimation, significant figure, composite shape	Sample space, exhaustive, theoretical, substitution	Trigonometry, adjacent, index	Venn diagram, discrete, continuous	Simultaneous equations, outlier, plan, elevation
Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)	Key Assessment Task (KAT)
In class test on recent content (week beginning 9th October)	Major assessment (to be taken week beginning 4th December)	In class test on recent content (week beginning 22nd January)	In class test on recent content (week beginning 11th March)	In class test on recent content (week beginning 6th May)	In class test on recent content (week beginning 17th June)

St Peter's Collegiate Academy

Yr 9 Mathematics Progress Ladder

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	Number I can.....	Algebra I can.....	Ratio and Proportion I can.....	Probability and Statistics I can.....	Geometry and Measure I can.....
Mastering	effectively recall and apply my knowledge of all the content below achieving over 90% in assessments, solving problems that are unfamiliar and may require inference.				
Advancing	effectively recall apply the vast majority of the content taught, achieving an average score between 70 and 89% in assessments In addition to *Securing,* students show an excellent understanding of:				
	Bounds and error intervals, Recurring decimals to fractions, Fractional indices	Simultaneous Equations, Equation of a line from points and parallel lines, Factorising quadratics	Successive percentage change (compound interest), Multipliers to solve changing value problems	Venn diagrams with set notation, Probability trees for dependent events	Trigonometric exact values, Angles in polygons, Arc length and sector area Surface area of spheres, pyramids, cones
Securing	effectively recall and apply the majority of the content taught, achieving an average score between 50 and 69% in assessments In addition to *Developing,* students show a good understanding of:				
	HCF and LCM, Rounding to significant figures and estimation, Index laws with positive powers, Decimal multiplication/division formal methods, Standard form calculations	Solving linear equations with unknowns on both sides, Expanding double brackets, Equation of a line	Solving multi step ratio problems (often cross topic), Multipliers to carry out percentage changes, Fractions as operators in changing value problems	Frequency trees, Expectation, Venn diagrams, Vertical line graphs, Time series graphs, Probability trees for independent events	Trigonometry, Pythagoras theorem, Sum of interior angles in polygons, Volume of spheres, pyramids, cones 3-figure bearings and parallel lines, Surface area of a cylinder
Developing	effectively recall and apply the some of the content taught, achieving an average score between 30 and 49% in assessments In addition to *Emerging,* students show a good understanding of:				
	Prime factorisation, Rounding (not significant figures), Decimal addition/subtraction formal methods, Standard form, convert to and from	Draw graphs of linear equations Factorising into single brackets, Find the gradient and intercept of lines, Linear equations with two or more steps	Ratios - finding unknowns, Comparisons using percentages, Percentages greater than 100%,	Exhaustive events, Sample space diagrams, Listing outcomes, Correlation	Properties of quadrilaterals, Circle area and circumference, Volume of prisms, Plans and elevations
Emerging	recall sections of the year 8 content, achieving an average score up to 29% in assessments An emerging student will have a basic understanding of:				
	Primes, multiples, factors	Algebraic vocabulary,	Ratio simplifying and sharing,	Relative frequency,	Compass points,

	Terminating decimals to fractions	Expanding brackets and simplifying with multiple variables, Substitute values into expressions,	Writing one quantity as a percentage of another, Basic percentage change	Averages, Scatter graphs plotting and line of best fit	Angle rules, Parts of a circle, Area of 2D shapes, Volume of basic prisms,