	Emerging a student whose understanding of the Y9 Maths skills is still emerging will be able to:	**Developing** a student who is developing their Y9 Maths skills will be able to:	**Secure** a student who is secure in the skills in the Y9 Maths curriculum will be able to:	**Mastered** a student who has mastered the skills in the Y9 Maths curriculum will be able to:
Number	Calculate simple percentages without a calculator. Calculate a percentage increase/ decrease without a calculator. Recognise prime numbers.	Calculate simple interest. Use a multiplier to work out percentage change.	Calculate compound interest. Calculate the original value given the percentage change. Understand exponential growth. Write numbers in standard form. Work with numbers in standard form. Work out upper and lower bounds. Calculate fractional indices. Simplify surds.	A 'Master' in mathematics fully understands the topics taught and can demonstrate full understanding in extensive practice and checks over their work to ensure it is of exemplary standard. They can choose the maths required to solve problems presented in a format they have never seen before. They find their own mistakes, and those of others, and devise strategies to minimise them in the future.
Fractions	Find equivalent fractions. Add and subtract fractions with equal denominator. Convert improper fractions to mixed numbers. Find fractions of an amount.	Add and subtract fractions with any denominator. Multiply and divide fractions.	Use fractions in an algebraic context. Add/ subtract/multiply/divide mixed numbers. Convert recurring decimals to fractions.	

Calculations	Work out powers of 10 Multiply any number by a single digit. Round to nearest whole number or to decimals places. Do simple calculations involving speed, distance and time. Recognise metric and imperial units.	Multiply any number by a two digit number. Multiply decimals by a single digit. Know how to do percentage calculations on a calculator. Solve proportion problems using the unitary method. Can convert between metric and imperial units.	Multiply any decimal numbers together. Know how to do fraction calculations on a calculator. Change between decimal time to time in hours and minutes. Do any calculations involving speed, distance and time.	A 'Master' in mathematics fully understands the topics taught and can demonstrate full understanding in extensive practice and checks over their work to ensure it is of exemplary standard. They can choose the maths required to solve problems presented in a format they have never seen before. They find their own mistakes, and those of others, and devise strategies to minimise them in the future.

Understanding Algebra	Multiply out brackets. Factorise simple expressions. Use basic index notation. Simplify expressions by collecting like terms.	Solve linear equations. Solve equations with x on both sides. Solve equations with brackets. Factorise expressions with powers.	Solve equations with fractions. Rearrange equations and formulae. Expand two brackets. Expand three brackets. Factorise quadratic expressions. Know the difference of two squares.	A ‘Master’ in mathematics fully understands the topics taught and can demonstrate full understanding in extensive practice and checks over their work to ensure it is of exemplary standard. They can choose the maths required to solve problems presented in a format they have never seen before. They find their own mistakes, and those of others, and devise strategies to minimise them in the future.

Using Algebra	Plot co-ordinates in any quadrant. Draw a straight line graph by completing a table. Spot a linear sequence and work out the next few terms.	Plot and generate co-ordinates for an exponential growth graph. Use a formula in context. Fully understand y = mx + c Recognise parallel and perpendicular lines. Find the nth term of a linear sequence.	Solve quadratic equations graphically. Solve simultaneous equations graphically. Solve cubic equations graphically. Work out the nth term of a quadratic sequence.	A ‘Master’ in mathematics fully understands the topics taught and can demonstrate full understanding in extensive practice and checks over their work to ensure it is of exemplary standard. They can choose the maths required to solve problems presented in a format they have never seen before. They find their own mistakes, and those of others, and devise strategies to minimise them in the future.

Shape	Know where the pi button is on their calculator. Label the different parts of a circle. Enlarge a shape by a scale factor. Construct triangles using ruler, angle measurer and pair of compasses. Construct a perpendicular bisector and an angle bisector.	Knows how to calculator the area and circumference of a circle. Can enlarge a shape about a point by a scale factor. Can use Pythagoras Theorem to calculate the longest side on a right angled triangle. Calculate the volume of a prism. Calculate the surface area of a prism.	Knows how to calculate areas to compound shapes made from parts of a circle. Use Pythagoras Theorem to calculate any side on a right angled triangle. Convert between units of area and volume. Calculate lengths of arcs and areas of sectors of a circle. Calculate volume and surface area of cylinder.	A ‘Master’ in mathematics fully understands the topics taught and can demonstrate full understanding in extensive practice and checks over their work to ensure it is of exemplary standard. They can choose the maths required to solve problems presented in a format they have never seen before. They find their own mistakes, and those of others, and devise strategies to minimise them in the future.

Geometry	Recalls the names of basic polygons, ie pentagon, hexagon, octagon. Knows that angles on a line sum to 180 Knows that angles in a triangle sum to 180 Knows that angles around a point sum to 360 Match plans and elevations with 3D shapes.	Recognise shapes that tessellate. Knows what interior / exterior angles are. Knows that exterior angles sum to 360 Knows the difference between a regular and irregular polygon. Use the correct trigonometry ratio to find the missing side of a right angled triangle. Calculate bearings and read from scale diagrams. Draw 3D shapes on isometric paper.	Knows how to calculate areas to compound shapes made from parts of a circle. Use Pythagoras Theorem to calculate any side on a right angled triangle. Convert between units of area and volume. Calculate lengths of arcs and areas of sectors of a circle. Calculate volume and surface area of cylinder.	A ‘Master’ in mathematics fully understands the topics taught and can demonstrate full understanding in extensive practice and checks over their work to ensure it is of exemplary standard. They can choose the maths required to solve problems presented in a format they have never seen before. They find their own mistakes, and those of others, and devise strategies to minimise them in the future.

Data Handling	Plot data onto a scatter diagram. Recognise positive / negative correlation Read off a two way table. Calculate probabilities by listing outcomes. Calculate the probability of an event NOT happening.	Compare two or more sets of data. Read data from a time series graph. Estimate the mean from a frequency table. Read information off a step graph. Compare theoretical and experimental probabilities.	Estimate the mean from a grouped frequency table. Plot and interpret cumulative frequency diagrams. Use a tree diagram to calculate probabilities. Understands the meaning of independence and mutually exclusive. Calculate relative frequencies.	A ‘Master’ in mathematics fully understands the topics taught and can demonstrate full understanding in extensive practice and checks over their work to ensure it is of exemplary standard. They can choose the maths required to solve problems presented in a format they have never seen before. They find their own mistakes, and those of others, and devise strategies to minimise them in the future.