Curriculum (Content Ma	р	Subject: Year 10 Maths - Foundation										
Month			September	Term 1 October	November	December	January	Tebruary	erm 2 March	April	May	Term 3	vlut
	*		Number	Algebra	Graphs, Ta	bles and Charts	Fractions and Percentages	Equations, Inequa	alities and Sequences	Angles	1) Averages and Range	Graphs	Transformations
	Units of Wor		NUMBER	ALGEBRA	During December students were re-taught on Q by Q analysis documents, following AP and r	DATA content that was identified as not being secure, 1 assessments. Year group gaps were identified e-visited.	NUMBER	AL	GEBRA	SHAPE	2) Perimeter, Area, Volume SHAPE	ALGEBRA	SHAPE
Cultural Transmission	National Curriculum area – KS4		"estimate powers and roots of any given positive number" "calculate with roots, and with integer indices" "apply and interpret limits of accuracy when rounding or truncating"	"simplify and manipulate algebraic expressions by: - factorising quadratic expressions, including the difference of two squares; - simplifying expressions involving sums, products and powers, including the laws of indices" "where appropriate, interpret simple expressions as functions with inputs and outputs"	"Interpret and construct tables and line graphs for time series data" "Interpret, analyse and compare the distributions of data sets from univariate empirical distributions through: appropriate graphical representation involving discrete, continuous and grouped data, appropriate graphics of bivariate data; recognise correlation and know that it does not indicate causation; draw estimated lines of best fit; make predictions; interpolate and extrapolate apparent trends whilst knowing the dangers of so doing"		"identify and work with fractions in ratio problems" 1 "calculate exactly with fractions"	"translate simple situations or procedures into algebraic expressions or formulae; derive an equation (or two simultaneous equations), solve the equation(s) and interpret the solution" "solve linear inequalities in one variable; represent the solution set on a number line" "recognise and use sequences of triangular, square and cube numbers, simple arithmetic progressions, Fibonacci type sequences, quadratic sequences, and simple geometric progressions (r n where n is an integer, and r is a positive rational number" "deduce expressions to calculate the nth term of linear sequences"		"consolidating subject content from key stage 3"	 "Infer properties of populations or distributions from a sample, whilst knowing the limitations of sampling" "Interpret, analyse and compare the distributions of data sets from univariate empirical distributions through: appropriate measures of central tendency (including modal class) and spread" "consolidating subject content from key stage 3" 	"use the form y mx c = t to identify parallel lines; find the equation of the line through two given points, or through one point with a given gradient" "plot and interpret graphs (including reciprocal graphs) and graphs of non-standard functions in real contexts, to find approximate solutions to problems such as simple kinematic problems involving distance, speed and acceleration"	"Interpret and use fractional scale factors for enlargements" "describe translations as 2D vectors"
	Substantive Knowledge	The What!	Worded problems - decimals Using Place Value Indices Using Prime Factor Form	Using expressions & formulae	Time Series Pie Charts Scatter Graphs Line of Best Fit		Add & Subtract Fractions, including mixed numbers Multiply & Divide Fractions, including mixed numbers Fractions of Amounts Convert Fractions and Decimals Convert Fractentages and Decimals Simple Interest Percentage Increase and Decrease, including multipliers Calculate VAT, Salary, Mortgages Fractions Problem-Solving	Solving inequalities on a number line Representing inequalities on a number line Inequalities involving more than one term Using Nth Term		Geometrical Problems	1) Estimating the mean Sampling 2) More volume & surface area	y=mx+C Real-Life Graphs Distance-Time Graphs	Describing transformations
	Disciplinary knowledge	The How!	Understanding place value Understanding powers Drawing Prime Factor Trees	Understanding algebraic notation Turning words into algebraic notation	Drawing & Plotting Graphs Understanding Angles in a circle Understanding Line of best fit (Maths vs. Science)		Descentance Toeklore Column Using Parts of a whole Understanding Multiplication and Division by 100 Simplifying Fractions Problem-Solving skills	Understanding inequality symbols Understanding term-to-term sequences		ldentifying keywords Working through a problem - in stages	1) Using Midpoints Understanding averages calculations Understanding bias 2) Using formulae	Drawing & plotting graphs Understanding formulae	Understanding reflection, rotation, translation and enlargement.
	Sequencing (Flow)	Retrieval & Extension	Builds from KS3: Builds from KS3: Builds from KS3: Calculations Simplifying Expressions Bar Charts Decimal Numbers Substitution Frequency Tables Place Value Expanding and Factorising Brackets Two-Way Tables Factors and Multiples Stem AL Leaf Stem AL Leaf Squares, Cubes, Roots Further develops in Y11: Prime Factors Prime Factors Expanding Double Brackets Further to develops in Y11: Prime Factors Quadratic Expressions Revision of all data skills Further develops in Y11: Quadratic Graphs Standard form			Builds from KS3 Add, Subtract, Multiply, Divide Fractions Calculating Percentages Further develops in Y11: Further extension of multiplying and dividing fractions	Builds from KS3: Solving Equations Inequalities Sequences Further develops in Y11: Solving quadratic equations Solving simultaneous equations		Builds from KS3 Consolidation of KS3 angles knowledge <u>Further develops in Y11:</u> Constructions Congruency Similar Shapes	1) Builds from K53: Averages Range Further develops in Y11: Revision of all averages skills 2) <u>Builds from K53:</u> Consolidation of K53 perimeter, area and volume Further develops in Y11: Circles Pyramids	Builds from KS3: Plotting a linear graph Speed, Distance, Time F <u>urther develops in Y11:</u> Quadratic, Cubic and Reciprocal graphs Simultaneous Equations on a graph	Builds from KS3: Reflection Rotation Translation Enlargement <u>Further develops in Y11:</u> Similarity	
	Summative Assessment		Deep Mark 1: Homework End of Topic Test - Number	Deep Mark 2: Homework End of Topic Test - Algebra	Deep Mark 1: AP1 Assessment - Whole Schoo Data Collection Homework	l Deep Mark 2: Homework End of Topic Test - Graphs, Tables and Charts	Deep Mark 1: Homework End of Topic Test - Fractions & Percentages	Deep Mark 2: Homework	Deep Mark 1: AP2 Assessment - Whole Schoo Data Collection End of Topic Test - Equations, Inequalities and Sequences Homework	I Deep Mark 2: Homework End of Topic Test - Angles	Coast 1) Deep Mark 1: Homework End of Topic Test - Averages and Range 2) End of Topic Test - Perimeter, Area, Volum Homework	Deep Mark 2: AP3 Assessment - Whole School Data Collection e End of Topic Test - Graphs Homework	End of Topic Test - Transformations
Personal Empowerment	Virtue		Friendliness & Civility	Justice & Truthfulness	Courage Generosity		Gratitude	Good Speech Good Temper & Humour		Self-Mastery		Compassion	Good Sense
	Link to Virtue	The opportunity to reflect, think deeply and critically about an issue.	Students will learn about friendly numbers. Students will also work closely on paired and group work to practice friendliness and civility.	Students will look at the truthfulness of expressions and how they can be manipulated.	Students will demonstrate courage in extending their knowledge of data and tables to find even further information and data.	Students will demonstrate generosity by helping other students and leading on their learning.	Students will demonstrate gratitude for knowing more than one method for calculating with fractions and percentages. Students will also be grateful for learning a skill regularly used in everyday life.	Students will demonstrate good speech by being able to explain both their own working as well as explaining whether others have made mistakes and, where necessary, correcting them.	Students will need to demonstrate good temper and humour as the work gets more difficult and stretches them in terms of algebraic skills.	Students will be using this topic to ensure they have mastered their angle knowledge built in KS3.	Students will be using these topics to ensure they have mastered their averages and shape knowledge built in KS3.	Students will show compassion as they look at the graphs of donation amounts for charities before, during and after lockdown.	Students will show good sense as they understand how to describe, not just draw transformations.
Preparation for Work	Skill	kills	Listening	Leadership	Problem-Solving	Creativity	Staying Positive	Speaking	Staying Positive	Aim	ing High	Speaking	Teamwork
	Link to Skill	Transferable s	Students will need to be able to listen to each other and explain another student's opinion. Students will also need to listen to the teacher and pick out underlying consistencies and themes in their learning. This unit links to careers in data analysis and software development	Students will lead on their own and others' learning. r This unit links to careers in computing and engineering.	Students will use problem-solving skills throughout this module to ensure they can make appropriate conclusions based on data. This unit links to careers in data analysis and research projects.	Students will need creativity to ensure they draw appropriate graphs and draw them accurately. This unit continues to look at careers in data analysis and research projects.	Students will need to stay positive as they build on skills they already have to ensure they can apply these to more difficult examples. This unit looks at careers in banking, finance and brokerage.	Students will demonstrate speaking by being able to explain both their own working as avel as explaining whether others have made mistakes and, where necessary, correcting them. This unit looks at careers in coding and cryptography.	Students will need to stay positive as the wori ill gets more difficult and stretches them in terms of algebraic skills. This unit continues to look at careers in codin and cryptography.	k Students will need to aim high as they further extend their angles knowledge built in KS3 and use these in order to problem-solve more g difficult questions. This unit looks at careers in problem-solving such as technicians, accountancy and social workers.	Students will need to aim high as they further extend their averages and shape knowledge built in KS3. This unit looks at careers in data analysis and drawing conclusions as well as design, architecture and constructions.	Students will demonstrate speaking by being able to explain both their own working as well as explaining whether others have made mistakes and, where necessary, correcting them. This unit links to careers in the charity sector.	Students will work in groups and use teamwork to interpret combined transformations. This unit links to careers in architecture and design.
Preparation for Citizenship	SMSC & British Values	saues	Social Individual Liberty	Social Moral Rule of Law	Social Moral Tolerance		Social Moral Mutual Respect	Social Rule of Law		Social Cultural Democracy	Social Moral Mutual Respect	Social Moral Cultural	Social Tolerance
	Link to SMSC & British Values Developing opinions on curent iss		Students will use their social skills to demonstrate friendliness & civility as they complete paired and grouped activities. Students will understand individual liberty and the freedom that prior learning can gain you in terms of future learning.	ts will use their social skills to strate friendliness & civility as they tee paired and grouped activities. Students will use their social skills throughout this topic as they work in pairs and groups. Students will use their social skills throughout this topic as they work in pairs and groups. Students will look at the moral repercussions of misrepresenting data and how graphs can b Students will look at the moral repercussions of misrepresenting data and how graphs can b Students will look at the moral repercussions of misrepresenting data and how graphs can b Students will look at the moral repercussions of misrepresenting data and how graphs can b st will understand individual liberty and within their pairs and groups. Students will look at how tolerance can be impacted when data is misrepresented in graphs Students will look at how tolerance can be impacted when data is misrepresented in graphs in so if future learning. Students will understand how the 'rule of law' links with justice & truthfulness and that following processes is important for successful outcomes.		Students will need to use their social skills as they work together on projects. Students will look at the moral reasoning behind taxes and whether rates are fair for all Students will discuss the mutual respect needed in order to understand why paying taxes on salaries benefits everyone.	Students will need to use their social skills to support each other to make progress, especially as they combine these with their speaking and communication skills. Students will need to understand the 'laws' of inverse operations and the link to solving equations, as well as how solving equations and solving inequalities link.		Students will use their social skills for paired and group activities. Students will appreciate the contributions different cultures have given to mathematics, especially in geometry. Students will demonstrate democracy as they discuss, debate and decide which angle rules are appropriate for questions whist recognising there could be more than one solution.	Students will look at using their social skills in grouped and paired work thoughout both topics. Students will discuss the moral consequences of misrepresenting data as an 'average' and examples of where this has been done previously. Students will demonstrate mutual respect with each other as they master the skills in both topics and exercise patience to help each other instead of getting frustrated when a peer does not understand.	Students will use their social skills throughout the paired and group work activities. Students will look at the moral reasons people donate to. Students will discuss the cultural differences in opinions about giving money to charity. Students will understand that many people have increased individual liberty because of h the charitable donations of others.	Students will use their social skills as they work in groups to interpret combined transformations for both drawing and describing. Students will show tolerance towards each other as they work in pairs and groups for different activities.	