

Year 7	Autumn Term		Spring term		Summer term	
	1	2	3	4	5	6
Topic Summary	Sequences, Place Value, Calculations	Perimeter/Area/Volume and Displaying Data	Angles and Algebraic Manipulation	FDP and Linear Graphs	Powers/Roots and Averages	Ratio, Percentages, Algebraic Manipulation
Thinking Hard	1. Write numbers using standard form 2. Perform calculations with standard form	1. Calculate surface area of 3D shapes including cubes, cuboids and triangular prisms. 2. Identify and critique misleading features of graphs/tables.	1. Use a combination of angle facts to calculate missing angles 2. Use substitution in a variety of contexts	1. Understand and calculate simple interest 2. Write equations of parallel lines in the form $y=mx+c$ from a graph	1. Calculate the mean from grouped data 2. Simplify and perform calculations including surds	1. Solve inverse proportion problems in real-life situations 2. Calculate reverse percentage change 3. Use algebra in real life situations
Developing Character	Curiosity: exploring different patterns in the world we live in.	Mindfulness: Validity of statistics in life.	Grit: Systematic approach to tackling work/presenting work. Learning what is seen as the "scary" part of Mathematics (algebra)	Curiosity: FDP links as equivalents. Understanding the application to basic everyday life.	Curiosity: Creating a statistical enquiry and becoming aware of how statistics can be manipulated.	Self-Assurance: A systematic approach to solving equations, making and testing conjectures.
Understanding Diversity	Acquiring culture capital: Fibonacci sequences and patterns in nature.	Understanding democracy: Looking at real life examples of data represented in different ways.	No limits to your destination: rules of algebra, universal language and problem solving tool.	Understanding environmental diversity: Different representations of FDP in a variety of contexts.	Awareness of where you live: Comparing averages in different contexts.	Being a world citizen: finance links with percentages , particularly interest rates.
Literacy Reading, Oracy	Reading 1: The Pattern Shortcut Reading 2: How many hairs are there on an adult humans head?	Reading 1: Why do we learn Maths? Reading 2: Energy, climate and the environment	Reading 1: Animals that can do Maths understand more than we think Reading 2: Can bees count?	Reading 1: What's the best way to cut a cake? Reading 2: Something about nothing	Reading 1: Crime fighting maths Reading 2: Do more people go to football matches at the weekend than go to church?	Reading 1: Cows versus human - which emits the most methane? Reading 2: How much water is flushed down London toilets each day
Gatsby, Careers	Sequencing - using in-tray examples Concept of 'input/ operation/ output to every aspect of modern life (mobile phones, Uber, programming))	Architecture, Engineering, Product Design, Data analyst, Big Data, Marketing (SEO), Business (financial/sales data), Actuary, Academia/Research, Research and Development, Scientific Research, Small Business Owner, Media, Politics, Civil Servant, Data Scientist, Project Manager	Engineering, design, art Stem careers - lots of careers involve logical thinking and having to follow a process to get to a successful outcome	Medicine, Statistician, Data analyst across numerous industries	Data analyst, Big Data, Marketing (SEO), Business (financial/sales data), Actuary, Academia/Research, Research and Development, Scientific Research, Small Business Owner, Media, Politics, Civil Servant, Data Scientist, Project Manager	Data analyst, finance, construction and engineering Stem careers - lots of careers involve logical thinking and having to follow a process to get to a successful outcome
Inclusivity	Use of placemats for students to pre-teach vocabulary and to structure thinking and organisation (placemat left, work right). High expectations of organisation and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, concise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based on complex PLPs with methods explicitly taught. Choral response used to develop oracy.		Use of placemats for students to pre-teach vocabulary and to structure thinking and organisation (placemat left, work right). High expectations of organisation and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, concise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based on complex PLPs with methods explicitly taught. Choral response used to develop oracy.		Use of placemats for students to pre-teach vocabulary and to structure thinking and organisation (placemat left, work right). Placemats to include more opportunities for independence. High expectations of organisation and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, concise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based on complex PLPs with methods explicitly taught. Paired talk used to develop oracy.	
Cross-Curricular Links	Binary - the main computer language - is used regularly in Computer Science.	Engineering - construction constraints/requirements Displaying data - links to sustainability and climate change (Geography/science)	Cross curricular multi subject including rearranging and substitution which are particularly used in Science and Engineering. Inequalities used in Computing for logic commands	Science - use of multipliers and exponential growth. Subjects such as history and geography that use linear graphs to display data	Links to data analysis in Science as well as critical reasoning. Social looking at real life data	Links to computing through using a sequence of steps to solve a problem. Lots of subjects may use and refer to 'unknowns' within the context of their topics. Geography through map reading, engineering for scale drawings.
Extra-Curricular Links	Coding, game design (esports)	Construction, trades skills involving measuring	Coding, robotics, cyphers, construction Orienteering, navigation, woodworking, snooker/pool	Cooking and baking, Model Making	The ability to reason and understand data allows for a more well rounded worldly understanding	Solving puzzles, crosswords, logical problem solving, shopping, Baking, Modelling
Complex PLP	1. Number bonds to 10	2. Number bonds to 20.	3. Number bonds to 100	4. Timestables (2/3/5/10)	5. Timestables (2/3/4/5/10) with related division facts.	5. Timestables (2-12) with related division facts.
Precise Learning Endpoints Students will learn/ be able to:	1. Describe and continue sequences using diagrams and numbers 2. Confidently round numbers to a given degree of accuracy 3. Perform calculations using mental and written strategies and using calculators 4. Identify factors, multiples and prime numbers	1. Recognise and name 2D and 3D shapes and their properties 2. Calculate perimeter, area and volume of shapes 3. Display data using tables and graphs	1. Draw and measure lines to a suitable degree of accuracy 2. Find missing angles using angle facts 3. Find inputs and outputs using function machines 4. Substitute into expressions 5. Solve linear equations	1. Calculate fractions and percentages of amounts 2. Add, subtract, multiply and divide fractions 3. Convert between fractions, decimals and percentages 4. Plot coordinates in all 4 quadrants 5. Plot linear graphs 6. Identify gradients and mid-points of a line	1. Calculate the mean, median, mode and range from a set of data 2. Simplify expressions using powers 3. Perform calculations using BIDMAS accurately	1. Simplify ratios (including into the form 1:n) 2. Divide amounts into a ratio 3. Solve direct proportion problems 4. Calculate percentage increase and decrease 5. Manipulate algebraic expressions and solve equations
Maths Year 8	Autumn Term		Spring term		Summer term	
	1	2	3	4	5	6
Topic Summary	Calculations, Perimeter/Area, Directed Number	3D Shapes, Compound Units and Algebra	Fractions and Probability	Equations, Rounding, Ratio and Proportion	Angles and Percentages	Sequences and Statistics

Thinking Hard	1.Perform calculations with standard form 2. Simplify and perform calculations including surds 3. Substitute with negative numbers into complex formula, such as the quadratic formula	1. Calculate surface area of 3D shapes, including prisms and cylinders 2. Calculate density, mass and volume where units need converting 3. Form equations where expanding brackets are required	1. Recognise and calculate with reciprocals 2. Calculate probability using probability trees	1. Form equations from worded, real-life situations 2. Use inequality notation for error intervals 3. Use algebra to set up proportional formulae	1. Calculate interior and exterior angles in polygons. 2. Calculate the number of sides in a polygon using interior and exterior rules 3. Calculate using repeat percentage change.	1. Calculate the nth term of quadratic sequences 2. Critique data collection methods and graphs/charts 3. Calculate averages from grouped data
Developing Character	Curiosity: Making real life connections with abstract concepts	Grit: application of compound units and recalling formula triangles.	Optimism: understanding the differences between theoretical probability and experimental probability.	Self-Assurance: The use of recipes and finances within proportion.	Mindfulness: Accuracy of drawings, measuring etc, using correct equipment .	Mindfulness: Validity of statistics in life.
Understanding Diversity	Awareness of where you live: our climate is temperate, however, in other parts of the world the "negative" temperatures can be more extreme.	Real-life application: models and visuals of real 3D shapes (e.g. Toblerones/pyramids)	Being a world citizen: Life chances depending on where in the world you live	Real-life applications: recipes and currencies from different cultures.	Being a world citizen: finance links with percentages , particularly interest rates.	Understanding democracy: Looking at real life examples of data represented in different ways.
Literacy Reading, Oracy	Reading 1: What is it about bees and hexagons? Reading 2: For these artists, Maths is their muse	Reading 1: Less is more: The quest for minimal surfaces Reading 2: How to make the world's roundest football	Reading 1: How hard is it to scramble a Rubik's cube? Reading 2: How many hairs are there on a human head?	Reading 1: Why do we use the letter x? Reading 2: Why bother calculating pi to 86.8 trillion digits	Reading 1: Inside the race to find the first billion-digit prime number. Reading 2: Why do science fiction writers like primes?	Reading 1: Worried about shark attacks or terrorism? Reading 2: England's crop circle controversy
Gatsby, Careers	Meteorologist, Engineering, construction, finance	Engineering, construction, STEM opportunities	One of the fastest growing industries. Data Science, Social Media analytics, Business, Politics, Media, Government, Academic and Scientific Research	Travel international business. Science, chemistry, STEM opportunities Finance, construction, pharmaceuticals	Engineering, design, art - how to become a aircraft engineer (bitesize)	Data analyst, Big Data, Marketing (SEO), Business (financial/sales data), Actuary, Academia/Research, Research and Development, Scientific Research, Small Business Owner, Media, Politics, Civil Servant, Data Scientist, Project Manager
Inclusivity	Use of placemats for students to pre-teach vocabulary and to structure thinking and organisation, with opportunities for independence. High expectaions of organisaion and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, consise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based on complex PLPs with methods explicitly taught. Choral response used to develop oracy.		Use of placemats for students to pre-teach vocabulary and to structure thinking and organisation, with opportunities for independence. High expectaions of organisaion and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, consise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based on complex PLPs with methods explicitly taught. Choral response used to develop oracy.		Placemats to be used with minimal structure, only including worked examples and key words. High expectaions of organisaion and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, consise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based on complex PLPs with methods explicitly taught. Paired talk used to develop oracy.	
Cross-Curricular Links	Science, Geography, Business Studies	Engineering, Science, Geography	Science, Geography, Engineering, Food prep	Science. Understanding of proportion, the value of labour	Art introduces colour wheels and geometric tools. Links to Engineering by introducing compass work which can be used for detailed schematics involving curves. Looking at geometric art from across the world	Displaying data - links to sustainability and climate change (Geography/science)
Extra-Curricular Links	Exercise - counting reps and tracking weight loss/gain	Construction, trades skills involving measuring	Games of chance, diet and exercise, investments	Cooking, scale drawings, model making	Orienteering, navigation, woodworking, snooker/pool	The ability to reason and understand data allows for a more well rounded worldly understanding, debate club
Complex PLP	1. 2 digit addition and subtraction (written methods)	2. Timestables (2-12) with related division facts.	3. Addition of decimals (written methods)	4. Timestables (2-12) with related division facts.	4. Subtraction of decimals (written methods)	6. Timestables (2-12) with related division facts.
Precise Learning Endpoints Students will learn/ be able to:	1. Calculate factors, multiples and primes (including HCF/LCM) 2. Simplify expressions using laws of indices 3. Calculate perimeter and area of 2D shapes.	1. . Perform calculations with directed numbers 2.Calculate volume of 3D shapes 3. Calculate surface area of 3D shapes 4. Manipulate algebraic expression	1. Calculate using compound units (SDT/MDV) 2. Add, subtract, multiply and divide fractions 3. Calculate the probability of events happening	1. Solve equations to find unknown values 2. Round numbers to a given degree of accuracy 3. Solve problems using ratio and proportion	1. Find missing angles using angle facts 2. Calculate percentages of amounts 3. Calculate percentage change	1. Continue numerical and diagrammatical sequences 2. Describe sequences using nth term 3. Display data using charts and graphs 4. Calculate averages, including from tables
Maths Year 9	Autumn Term 12		Spring term 34		Summer term 56	
Topic Summary	Coordinates and Graphs and Perimeter, Area, Volume	FDP, Pythagoras and Trigonometry, and Compound Units	Transformations	Proportion and Averages	Equations and Probability	Angles and Money
Thinking Hard	Developing Literacy: focusing on Mathematical names and properties of shapes. Acquiring knowledge by seeing the historical evolution of Shape names, formula, and Mathematicians (eg.: Pythagoras).	Being creative: Enjoying the links between Pythagoras's Right Hand Triangles and building, seeing how Euclid's Golden Ratio is all around us in real life.	Acquiring knowledge: Architects use geometry to study and divide space as well as draft detailed building plans. Builders and engineers rely on geometric principles to create structures safely.	Development of Literacy: Development of new terminology and the etymology of the words. Reading of recipes to form and manipulate ratios.	Mastery of learning: Creating diagrams from worded questions to help find probabilities.	Acquiring knowledge: Understanding of financial systems that they have access to. Deeper understanding of interest and deposits to improve financial understanding and competency

Developing Character	Self-control: Accuracy of plotting coordinates and drawing lines with rulers.	Grit: Developing Calculator skills for tough trigonometry topics.	Mindfulness: Creating repeated patterns using reflection systematically - linking to interior and textile design.	Kindness: how and when could sharing amounts in a given ratio be more fair than sharing equally?	Optimism: understanding the differences between theoretical probability and experimental probability.	Gratitude: Being aware that we live in a developed country with financial stability
Understanding Diversity	Understanding environmental diversity: Looking at graphs and diagrams of different locations/landmarks (e.g Butser Hill)	Being a world citizen: Did Pythagoras really discover the theorem? Links to careers and jobs (e.g. building a roof).	Acquiring Cultural Capital: Explore uses of tessellation - Fashion, Interior design. Buildings (e.g. the Gherkin, Temple of Kandariya), Traditional African Fabrics	Awareness of where you live: Conversion graphs- different currencies. Exploring maps, (understanding of scale). Exploring Using a map of Cowplain & relating distance & size to London. Best buys and recipes.	No limits to your destination: rules of algebra, universal language and problem solving tool. Applications to real life situations when forming equations.	Respecting human rights: Financial systems across the world. Bank accounts, mortgages, welfare and allowances.
Literacy Reading, Oracy	Reading 1: Is Mathematics real? Reading 2: Fantastic fractals	Reading 1: How is trigonometry used in Architecture? 2: New Pythagoras Proof	Reading 1: Why do clever people get things wrong? Reading 2: Steven Hawking's article on artificial intelligence	Reading 1: How old is your dog? Reading 2: If I drop a feather and a football, which hits the ground first?	Reading 1: How many tennis balls are used at Wimbledon Reading 2: Crime fighting maths	Reading 1: A complete guide to cybersecurity Reading 2: Why do we pay tax?
Gatsby, Careers	Navigation, Fashion industry, Architecture, graphic design, Engineering, Architecture, Product Design	Design, architecture (linked to reading 1), animation, games development. Employability skills - following a process to get a successful outcome. Inputting data into a calculator.	Illustration and media, technical drawings and architecture, engineering	Finance, construction, pharmaceuticals	Risk management, insurance, finance, pharmaceuticals	Animation , architecture, fashion design Economist, financial advisor
Inclusivity	High expectaions of organisaion and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, consise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based only on numeracy skills. Placemats to be used where required for worked examples and key words. Structured paired talk and choral responce used to develop oracy.		High expectaions of organisaion and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, consise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based only on numeracy skills. Placemats to be used where required for worked examples and key words. Structured paired talk and choral responce used to develop oracy.		High expectaions of organisaion and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, consise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based only on numeracy skills. Placemats to be used where required for worked examples and key words. Structured paired talk and choral responce used to develop oracy.	
Cross-Curricular Links	Science, Engineering, Art	Art, Graphics, Engineering	Art, Media, Graphics	Food Tech when baking and altering recipes. Links to engineering with scale drawings. Will link to science looking at what affect the increase of one variable may have.	Science, business studies (risk and reward)	Engineering, Business studies
Extra-Curricular Links	Engineering - construction constraints/requirements, data analysis	Illustration, Design - Fashion - Graphics	Illustration, Design - Fashion - Graphics	Shopping, Baking, Modelling	Games of chance, investments, solving puzzles, crosswords, logical problem solving	Design - architecture, theme parks
Precise Learning Endpoints Students will learn/ be able to:	1. Plot coordinates in all 4 quadrants 2. Plot linear graphs 3. Identify equations of linear graphs 4. Calculate perimeter and area of 2D shapes 4. Calculate volume and surface area of 3D shapes	1. Calculate percentage change 2. Convert FDP 3. Find missing sides in right-angled triangles 4. Calculate using compound units (SDT/MDV)	1. Perform transformations of shapes 2. Describe transformations of shapes	1. Use the unitary method to solve problems using direct and inverse proportion 2. Calculate averages and decide which average is the best for a given scenarios	1. Solve equations to find unknown values 2. Calculate probabilities of independent and dependent events	1. Find missing angles in shapes 2. Use a pair of compasses to construct shapes/bisectors from a given description 3. Calculate with money 4. Understand how money is used in real life
Maths Year 10	Autumn Term 12		Spring term 34		Summer term 56	
Topic Summary	Indices, Standard Form, Surds, Triangles, Graphs	Congruency, Similarity and Number	Equations and Ratio and Proportion	Circles and Statistics	Simultaneous Equations, Algebraic Manipulation and Vectors	Probability and Transformations
Thinking Hard	Creating Independence: Interleaved unit of all number from previous years. Literacy being tested, and high standards of oracy needed.	Mastery of learning having a solid understanding of numeracy. Converting between units from different systems of measurement	Creating independence: Linking to real world situations i.e. baking in bulk, best buys, purchasing. Using recipes from around the world as examples when teaching proportional reasoning.	Changing the world: Understanding the influence of statistics in the real world	Being creative: Simultaneous Equations. Using abstract thinking to solve real life problems. Describing movement. Vectors working in abstract. Formulas to learn and remember	Being creative: Architects use geometry to study and divide space as well as draft detailed building plans. Builders and engineers rely on geometric principles to create structures safely.
Developing Character	Grit: Developing Calculator skills for tough trigonometry topics. Linking abstract concepts to mathematical processes.	Curiosity: proving congruency and similarity using the specified rules.	Self Assurance: How creating an equation can help us solve problems systematically. Understanding how sequences follow patterns. Mathematics teaches students to be disciplined and obey the rules.	Curiosity: Discovery of pi and the links between the parts of circles.	Grit: Finding solutions to difficult multi-step problems using algebraic techniques.	Optimism: understanding the differences between theoretical probability and experimental probability.

Understanding Diversity	Being a world citizen: Did Pythagoras really discover the theorem? Links to careers and jobs (e.g. building a roof).	Being a world citizen: understanding the use and methods for compound units, linking them to science	Awareness of where you live: Conversion graphs - different currencies. Exploring maps, (understanding of scale). Using a map of Cowplain & relating distance & size to London.	Understanding democracy: Understanding the influence and impact of data analysis on government, politics, media, and decision making	Real-life links: Linking vectors to real-life careers which students may be interested e.g. game design and programming.	Acquiring Cultural Capital: Explore uses of tessellation - Fashion, Interior design. Buildings (e.g. the Gherkin, Temple of Kandariya), Traditional African Fabrics
Literacy Reading, Oracy	Reading 1: Paralympic games Reading 2: Ineligible to serve - getting a job	Reading 1: Inside the race to find the first billion-digit prime number Reading 2: Is life unbounded?	Reading 1: Celebrating a new pie record Reading 2: Gauss the most brilliant Mathematician of his time	Reading 1: How are circles used in real life? Reading 2: Statistical illiteracy isn't a niche problem. During a pandemic, it can be fatal.	Reading 1: F1gur471v3ly 5p34k1ng (how your brain can read words made of numbers) Reading 2: Football statistics	Reading 1: Probably magic Reading 2: Luck and statistics
Gatsby, Careers	STEM - science/physics/engineering, Financial Analysis (sequences, indices)	STEM - science/physics/engineering (bounds, accuracy etc.)	STEM - Science/engineering. Construction and pharmaceuticals, inventory management and purchasing, currency conversions	Data Science, Social Media analytics, Business, Politics, Media, Government, Academic and Scientific Research	Design, architecture, animation, games development. Employability skills - following a process to get a successful outcome. Inputting data into a calculator.	Data scientist, quantitative analysis, biostatistics, market research
Inclusivity	High expectaions of organisaion and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, consise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based only on numeracy skills and FDP. Placemats to be used where required for worked examples and key words. Structured paired talk and choral responce used to develop oracy.		High expectaions of organisaion and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, consise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based only on numeracy skills and FDP. Placemats to be used where required for worked examples and key words. Structured paired talk and choral responce used to develop oracy.		High expectaions of organisaion and presentation of a Maths book are explicitly taught and upheld. Cowplain Visuals used consistently. Use of physical manipulatives and visual representations wherever possible. PPTs with clear, consise layout, in easy to read fonts, with no excess information included. Do Now to be simple and accessible, based only on numeracy skills and FDP. Placemats to be used where required for worked examples and key words. Structured paired talk and choral responce used to develop oracy.	
Cross-Curricular Links	Scientific notation in Science, graphs used in subjects such as PE, geography, history and others	Engineering, Art, Media. Science - compound units.	Science, food studies, business	Geography, Psychology (central tendency), Business. SMSC - Social understanding how statistics can be manipulated	Physics, Engineering, Computer Science.	Computer Science, Science, Art, Media
Extra-Curricular Links	Market analysis, data collection, engineering/construction, star gazing	Animation, architecture, design, fashion, graphics	Games of chance, investments, solving puzzles, crosswords, logical problem solving, shopping, Baking, Modelling	News, current affairs, video game statistics, sports	Game design and development, coding and problem solving, illustration	Games of chance, investments, art and media
Precise Learning Endpoints Students will learn/ be able to:	1. Simplify using laws of indices 2. Write numbers using standard form 3. Calculate using surds (H) 4. Find missing lengths of triangles using Pythagoras' Theorem 5. Find missing lengths and angles using trigonometry 6. Plot graphs and find equations of lines	1. Understand and apply the rules of similarity and congruency 2. Round numbers to a given degree of accuracy 3. Estimate solutions to a problem 4. Calculate using compound units	1. Solve equations to find unknown values 2. Calculate proportions using ratios 3. Use the unitary method to calculate direct and inverse proportion	1. Calculate the area and circumference of circles 2. Calculate the volume and surface area of cylinders, spheres and cones 3. Find missing angles in circles (H) 4. Display data using the most appropriate methods 5. Analyse data using averages	1. Manipulate expressions confidently. 2. Find next term and nth term of sequences 3. Solve simultaneous equations graphically and algebraically 4. Transform shapes from a given instruction 5. Describe the transformation of a shape 6. Use vector notation to solve problems	1. Calculate probabilities of single events. 2. Calculate probabilities of multiple events.
Maths Year 11	Autumn Term 12		Spring term 34		Summer term 56	
Topic Summary	Number, Algebra and Geometry	Ratio and Proportion, Statistics and Probability	Number, Algebra and Geometry	Ratio and Proportion, Statistics and Probability		
Thinking Hard	Development of literacy: Talking like a mathematician. Knowing and using the correct terminology	Development of literacy: Talking like a mathematician. Knowing and using the correct terminology	Development of literacy: Talking like a mathematician. Knowing and using the correct terminology	Development of literacy: Talking like a mathematician. Knowing and using the correct terminology		
Developing Character	Self-Control: Finding solutions to difficult multi-step problems using mathematical techniques. Develop a self identity and being part of a team as we face the challenges of year 11 together.	Optimism: Understanding the use of statistics in the wider world and being able to draw conculsions using data.	Self-Assurance: Using our knowledge of Number, Geometry and Algebra to conjecture, prove and reason.	Grit: Keep on going - nearly there!		
Understanding Diversity	Acquiring cultural capital: Real life applications	Acquiring cultural capital: Real life applications	Acquiring cultural capital: Real life applications	Acquiring cultural capital: Real life applications		
Literacy Reading, Oracy	Reading 1: Maths in a minute Reading 2: Will the world be over within this century?	Reading 1: The golden ratio Reading 2: A universal equation for the shape of a perfect egg	Reading 1: Too big to write but not too big for Graham Reading 2: The Calculated shortcut	Reading 1: How clubs approach transfers Reading 2: The colourful mathematician who helped design the atomic bomb		
Gatsby, Careers	Finance, business management, construction industry	Statisticians (Office for National Statistics), Marketing and Sales	Finance, business management, construction industry	Statisticians (Office for National Statistics), Marketing and Sales		
Inclusivity	ELCs used to ensure planning is personalised to the needs of each class to ensure maximum progress. Consistent routines and positive relationships between students and teachers.		ELCs and Mock Exams used to ensure planning is personalised to the needs of each class to ensure maximum progress. Consistent routines and positive relationships between students and teachers.			
Cross-Curricular Links	STEM	STEM	STEM	STEM		

Precise Learning Endpoints Students will learn/ be able to:	Be confident using integers, fractions and decimals in calculations to solve problems, including those linking to real world situations. Algebra is a universal language which allows us to think logically and solve problems. Understand how the world we live in is based around geometry, both from a man-made and natural perspective, including size, shape, distance and positioning of objects.	Be confident expressing the relationships between variables including in real world problems and more abstract concepts. Understand how the world we live in is based around geometry, both from a man-made and natural perspective, including size, shape, distance and positioning of objects. Understand how algebra is an abstract concept which underpins generalisation in mathematics and allows us to make links between different mathematical ideas Show confidence in displaying and interpreting data in a variety of ways to prove hypothesise. To be able to calculate the chance of one or more event happening using correct mathematical diagrams, notation and language.	Be confident using integers, fractions and decimals in calculations to solve problems, including those linking to real world situations. Algebra is a universal language which allows us to think logically and solve problems. Understand how the world we live in is based around geometry, both from a man-made and natural perspective, including size, shape, distance and positioning of objects.	Be confident expressing the relationships between variables including in real world problems and more abstract concepts. Understand how the world we live in is based around geometry, both from a man-made and natural perspective, including size, shape, distance and positioning of objects. Understand how algebra is an abstract concept which underpins generalisation in mathematics and allows us to make links between different mathematical ideas Show confidence in displaying and interpreting data in a variety of ways to prove hypothesise. To be able to calculate the chance of one or more event happening using correct mathematical diagrams, notation and language.	
---	---	---	---	---	--