Year 10 – Maths Foundation					
Curriculum intent	We believe that students deserve a creative and ambitious mathematics curriculum, rich in skills and knowledge, which ignites curiosity and prepares them well for everyday life and future employment. Our mathematics curriculum will give students the opportunity to: • become fluent in the fundamentals of mathematics, through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. • reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language. • can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and preserving in seeking solutions. • can communicate, justify, argue and prove using mathematical vocabulary. • develop their character, including resilience, confidence and independence, so that they contribute positively to the life of the school, their local community and the wider environment.				
Term	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Knowledge	• Percentage Change • Compound and Simple • Surface Area of 3D Shapes • Volume of 3D Shapes • Simultaneous Equations • Re-arranging Formula	• Trigonometry • Constructions • Y = mx + c • Real Life Graphs • Venn Diagrams Tree Diagrams	• Compound Measures • Ratio • Harder Graphs • Sequences • Sampling • Proportion	• Transformations • Error Intervals • Indices • Expanding Brackets • Factorising Brackets • Diagrams • Fractions	• Expressions • Equations • Right angled triangles • Surface Area	• Volume • Angles • Recap
Skills	Building Blocks – Finding basic percentages with and without a calculator. Understand the purpose of a multiplier when calculating repeated percentage change. Calculate simple interest.	Develop an understanding of sin, cos and tan. To be able to label triangles with the opposite, hypotenuse and adjacent. To be able to identify equations of parallel lines.	Calculating with density and pressure. Combining ratios. Calculating with ratios and algebra. Changing ratios. To be able to plot velocity time graphs and using	To be able to rotate a shape and describe a rotation of a shape. To be able to translate a shape and describe a translation of a shape.	Finding the lowest common multiple Finding the highest common factor Prime factor decomposition	Finding the surface area of cones. Finding the volume of cones. To be able to identify the angles in parallel lines rules. To be able to use the rules of angles in

Table header columns: Knowledge, Autumn 1, Autumn 2, Spring 1, Spring 2, Summer 1, Summer 2

	Calculate repeated percentage change including compound interest, growth and decay. Finding the surface area of pyramids Finding the surface area of cubes and cuboids Finding the volume of pyramids Finding the volume of cubes and cuboids. Solve simultaneous equations using elimination	Find the equation of a line from its gradient and y intercept. Find the equation of a line from two points on the line. Work with and identify equations of parallel and perpendicular lines. Plot linear real-life graphs. Use and find equations of linear real-life graphs. Understand and be able to uses set notation with Venn Diagrams. Use and draw tree diagrams for independent and dependent events.	these to calculate acceleration. To be able to recognise and plot graphs of cubic functions, reciprocal functions and geometric functions. To be able to identify the position to term rules for arithmetic and geometric sequences. To understand the different types of sampling and the meaning of bias. Interpreting direct and inverse proportion equations. Recognise graphs of direct and inverse proportion. To be able to use prior knowledge of transformations to combine these into one. •	To be able to reflect a shape and describe a reflection of a shape. To be able to enlarge a shape and describe a enlargement of a shape. Finding error intervals Finding error intervals of truncated Numbers. Recognise the three laws of indices. Use the laws of indices with both positive and negative indices. Simplify expressions using the laws of indices. Expand single and double brackets using the grid method. Factorising single and double brackets.	Finding the HCF and LCM using prime factor decomposition Ordering fractions including with mixed Numbers. Performing all four operations with mixed numbers Simplifying expressions using index laws Solvign equations with two or more steps. Solving equations with unknowns on both sides. Constructing and solving equations Find unknown sides and angles in right angles triangles.	parallel lines to find missing angles.
Assessments	• Regular exam practice	• Autumn Assessment (exam paper sets 1 and 2 to do higher and 3 and 4 to do foundation) • Regular exam practice	• Regular exam practice	• Interpreting frequency table with grouped data. • Calculating the mean from grouped frequency tables.		

					- Draw Stem and Leaf diagrams. - Interpret stem and leaf diagrams. - Draw Line graphs. - Interpret line graphs and use these to predict missing data. -		
Curiosity	- Try a mini exam paper https://www.onmaths.com/mock_exams/mini-mock-1-higher-calculator/ - Visit the oak national academy website to view lessons and videos of the above topics. - Have a go at this interactive activity around rearranging equations. How many levels can you progress through? https://www.transum.org/software/SW/Starter_of_the_day/Students/Changing_The_Subject.asp?Level=6	- Mathematical advent calendar. - Try a mini exam paper https://www.onmaths.com/mock_exams/mini-mock-2-higher-calculator/ - Visit the oak national academy website to view lessons and videos of the above topics. - Practice your further trigonometry skills here: https://www.transum.org/Maths/Exercise/Advanced_Trigonometry/	- . - Try a mini exam paper https://www.onmaths.com/mock_exams/mini-mock-2-higher-calculator/ - Visit the oak national academy website to view lessons and videos of the above topics. Visit the independent learning section of SParx	- Try a mini exam paper https://www.onmaths.com/mock_exams/mini-mock-2-higher-calculator/ - Visit the oak national academy website to view lessons and videos of the above topics. Visit the independent learning section of SParx	- Try a mini exam paper https://www.onmaths.com/mock_exams/mini-mock-2-higher-calculator/ - Visit the oak national academy website to view lessons and videos of the above topics. Visit the independent learning section of Sparx - UKMT	- Try a mini exam paper https://www.onmaths.com/mock_exams/mini-mock-2-higher-calculator/ - Visit the oak national academy website to view lessons and videos of the above topics. Visit the independent learning section of SParx