

CURRICULUM PROGRESSION PATHWAYS SUBJECT: MATHEMATICS HOD: Ms C Jones 2020/21	Quality of Education: Curriculum is planned and sequenced so that new knowledge and skills build on what has been taught before and leads towards a clearly defined end point. Vision: Our vision is to prepare students for a changing and challenging world and to foster creativity, entrepreneurial spirit and personal success. We will develop personal and justified decision making as well as ethical responsibilities.																											
<p style="text-align: center;">KS3</p> <p style="text-align: center;">Year 7, Year 8, Year 9:</p> <p style="text-align: center;"><u>Spiral Curriculum</u></p> <p>Students will visit the various pillars of Secondary level Mathematics each year. With each revisiting, the subject content becomes deeper and more interconnected with other pillars.</p> <p><u>Knowledge:</u></p> <p>Year 7 Unit 1: Number and algebra Unit 2: Measure Unit 3: Number skills: Fraction, decimals and percentages Unit 4: Algebra Unit 5: Shape Unit 6: Data handling</p> <p>Year 8 Unit 1: Number and algebra Unit 2: Measure Unit 3: Probability Unit 4: Algebra Unit 5: Data handling Unit 6: Shape</p> <p>Year 9 Number Algebraic expressions Fractions, ratio and proportions Construction Angles Sequencing and graphs Percentages Solving equations Area and perimeter Data Working in 3D Probability Transformations</p> <p><u>Skills:</u> Identify key mathematical vocabulary, Verbalise reasoning, Begin to solve contextual questions, Select relevant information from a simple question, Understand that a letter or symbol can represent an unknown, Simplify algebraic expressions, Competent with key vocabulary, Can clearly and logically explain their method, Solve multistep and contextual questions, Select relevant information from a routine question.</p>	<p style="text-align: center;">KS4 GCSE</p> <p style="text-align: center;">Year 10:</p> <p>Knowledge: Year 10 Unit 1: Number and Algebra Unit 2: Indices, standard form and Surds Unit 3: Perimeter and Area Unit 4: Fractions, decimals and percentages Unit 5: Probability Unit 6: Rounding, estimating and bounds Unit 7: Polygons, Angles (H – Circle theorems) and scale Unit 8: Ration, Proportion and percentages Unit 9: Data Unit 10: Transformations Unit 11: Area, Volume, Similarity (H- Pythagoras) Unit 12: Sequences, Linear graphs and functions</p> <p>Skills: Continued use of KS3 skills, but applying them to more complex mathematical systems: Identify key mathematical vocabulary, Verbalise reasoning, Begin to solve contextual questions, Select relevant information from a simple question, Understand that a letter or symbol can represent an unknown, Simplify algebraic expressions, Competent with key vocabulary, Can clearly and logically explain their method, Solve multistep and contextual questions, Select relevant information from a routine question.</p> <p style="text-align: center;">Year 11:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 50%;">Year 11 Foundation</th> <th style="text-align: left; width: 50%;">Year 11 Higher</th> </tr> </thead> <tbody> <tr> <td>Unit 13: Pythagoras</td> <td>Unit 13: Basic trigonometry</td> </tr> <tr> <td>Unit 14: Drawing graphs and sketching</td> <td>Unit 14: Drawing and sketching graphs</td> </tr> <tr> <td>Unit 15: Solving equations</td> <td>Unit 15: Solving equations</td> </tr> <tr> <td>Unit 16: Trigonometry</td> <td>Unit 16: Transforming graphs and Adv. Trigonometry</td> </tr> <tr> <td>Unit 17: Probability</td> <td>Unit 17: Probability</td> </tr> <tr> <td>Unit 18: formulae and inequalities</td> <td>Unit 18: Formulae and inequalities</td> </tr> <tr> <td>Unit 19: Proportion</td> <td>Unit 19: Proportion</td> </tr> <tr> <td>Unit 20: Compound measures</td> <td>Unit 20: Compound measures</td> </tr> <tr> <td>Unit 21: Vectors</td> <td>Unit 21: Vectors</td> </tr> <tr> <td>Unit 22: Growth and decay</td> <td>Unit 22: Growth and decay</td> </tr> <tr> <td></td> <td>Unit 23: Pre-calculus and graph calc.</td> </tr> <tr> <td></td> <td>Unit 24: Numerical methods</td> </tr> </tbody> </table> <p>Skills: Continued use of KS3 and Y10 Skills, but applied to more complex mathematical systems. Extra focus on exam strategy.</p>	Year 11 Foundation	Year 11 Higher	Unit 13: Pythagoras	Unit 13: Basic trigonometry	Unit 14: Drawing graphs and sketching	Unit 14: Drawing and sketching graphs	Unit 15: Solving equations	Unit 15: Solving equations	Unit 16: Trigonometry	Unit 16: Transforming graphs and Adv. Trigonometry	Unit 17: Probability	Unit 17: Probability	Unit 18: formulae and inequalities	Unit 18: Formulae and inequalities	Unit 19: Proportion	Unit 19: Proportion	Unit 20: Compound measures	Unit 20: Compound measures	Unit 21: Vectors	Unit 21: Vectors	Unit 22: Growth and decay	Unit 22: Growth and decay		Unit 23: Pre-calculus and graph calc.		Unit 24: Numerical methods	<p>Further Ed., training, Careers</p> <p>Massively useful in a wide range of A Levels; particularly A Level Maths, A Level Sciences, Entry Level Maths and any analytical data-rich A Level, e.g. Geography, Psychology, Business Studies.</p> <p>More widely, Mathematics qualifications hold great sway in all forms of employment. As an indication of higher level logic, abstract thinking and astute problem solving, they are taken to be a real sign of cognitive skill and thus translate as an asset in any job anywhere in the world.</p>
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