

**EXAMPLE - Wollaston School: 2021/2022 Curriculum Map for MATHEMATICS Curriculum Lead: Miss R Lynch**

**Curriculum Aim & Scope:**

In Key Stage 3 we will build on the work that has been covered in the primary schools as well as beginning to introduce some lower level GCSE topics as part of the higher end challenging curriculum. Those working Below the expected level will continue to build on their numeracy skills whilst following an appropriate curriculum designed to improve proficiency in shape, data and algebra so students are prepared for the start of GCSE in year 9. Homework will be set weekly and will include questions designed to master essential skills each term. Development of problem solving and reasoning skills will be enhanced alongside the teaching of the main curriculum. Students will be encouraged to become more independent learners as they will have access to on-line mathematical learning resources which they will use in school and for homework. Links to literacy will include the spelling and definitions of new words associated with mathematics. Students work will be checked for spelling, punctuation and grammar. There will be three assessment points throughout the year.

Key Stage 4. We teach GCSE at two tiers 'Higher' and 'Foundation'. The content is prescribed but our aim is to develop problem solving skills and relate mathematics to real life needs.

Key Stage 5 A level Mathematics and Further Mathematics are taught together with Core Mathematics level 3. All content is prescribed.

	Autumn 1 - 2021	Autumn 2 - 2021	Spring 1 – 2022	Spring 2 - 2022	Summer 1 – 2022	Summer 2 - 2022
Year 7	<p><u>Analysing and displaying Data:</u> Two-way tables Averages and Range Graphs and Pie Charts. <u>Number work</u> including primes, negatives, powers, roots, functional maths calculations.</p> <p>Assessments Baseline 13<sup>th</sup> September</p>	<p><u>Algebra skills:</u> Expressions, Formulae, Brackets and powers, factorising. <u>Fractions:</u> Rules of fractions. Equivalent fractions: decimals: percentages.</p> <p>Assessment: w/c 8<sup>th</sup> Dec. 2021. Assess topics studied so far.</p>	<p><u>Angles in parallel lines and polygons, properties of triangles and quadrilaterals.</u> <u>Decimals:</u> adding, subtracting, multiplying and dividing. Rounding.</p> <p>Assessment Feb 7th</p>	<p><u>Algebra - Equations</u> Solving one, two step and more complex equations</p> <p>Assessment: w/c 14<sup>th</sup> March 2020. Assess last three topics.</p>	<p><u>Ratio and proportion:</u> Simplifying and sharing ratios. <u>Perimeter, area and volume:</u> Properties of 2D shapes. Surface area and volume of 3D shapes</p> <p>Assessment 16<sup>th</sup> May</p>	<p><u>Sequences and Graphs.</u> Finding nth term. Equations, gradients of straight lines</p> <p>Assessment: w/c 13<sup>th</sup> June 2020. Assessment of ALL topics studied this year.</p>

	11 <sup>th</sup> October					
Year 8	<p><b>Factors and Powers:</b> Indices, estimating, HCF, LCM. <b>Algebra:</b> Expressions, substitution, solving equations, factorising.</p> <p>Assessment 18<sup>th</sup> October</p>	<p><b>2D shapes &amp; 3D Solids:</b> Surface area, volume of prisms, Area and circumference of circles, Pythagoras. <b>Real life Graphs:</b> Distance time graphs, rates of change.</p> <p>Assessment: w/c 06.12.21. Assess 4 topics studied.</p>	<p><b>Transformations:</b> Rotation, Reflection, Translation, Enlargement. <b>Fractions: decimals</b> <b>Percentages:</b> Recurring decimals, repeated percentages</p> <p>Assessment 7<sup>th</sup> Feb</p>	<p><b>Constructions and Loci:</b> Constructing Perpendiculars, Finding locus of points.</p> <p>Assessment: w/c 14.03.22 Assess last three topics</p>	<p><b>Probability:</b> Probability diagrams, Mutually exclusive outcomes. Tree diagrams. <b>Scale drawings and measures:</b> Maps and scales, Bearings, Congruency, similarity.</p> <p>Assessment 16<sup>th</sup> May</p>	<p><b>Linear Graphs:</b> Plotting, gradients, equation of a line, parallel and perpendicular lines</p> <p>Assessment: w/c 20.06.2022 Assess all topics studied during the year.</p>
Year 9 Higher	<ul style="list-style-type: none"> <li>• Calculations</li> <li>• Fractions, decimals and percentages</li> <li>• Angles in parallel lines and shapes</li> <li>• Similar shapes</li> </ul> <p>Assessment: October</p>	<ul style="list-style-type: none"> <li>• Working in 2D</li> <li>• Expressions</li> <li>• Indices</li> <li>• Expanding and factorising single brackets</li> <li>• Algebraic fractions</li> </ul> <p>Assessment: December Covering all from term 1 - 2</p>	<ul style="list-style-type: none"> <li>• Formulae and functions</li> <li>• Expanding and factorising double brackets</li> <li>• Handling data 1 and 2</li> </ul> <p>Assessment: February</p>	<ul style="list-style-type: none"> <li>• Handling data 2</li> <li>• Measures and accuracy</li> </ul> <p>Assessment: March Covering all from 3 - 4</p>	<ul style="list-style-type: none"> <li>• Factors, powers and roots</li> <li>• Surds</li> <li>• Pythagoras</li> <li>• Circles and constructions</li> </ul> <p>Assessment: May</p>	<ul style="list-style-type: none"> <li>• Circles and constructions</li> <li>• Working in 3D</li> <li>• Revision</li> </ul> <p>Assessment: June. End of year assessment on all topics</p>
Year 10 Higher	<ul style="list-style-type: none"> <li>• Handling Data</li> <li>• Factors, powers and roots</li> <li>• Circles and constructions</li> </ul>	<ul style="list-style-type: none"> <li>• Working in 3D</li> <li>• Basic Graphs</li> </ul>	<ul style="list-style-type: none"> <li>• Combined events</li> <li>• Ratio and Proportion</li> <li>• Calculations (roots/indices and SF)</li> </ul>	<ul style="list-style-type: none"> <li>• Pythagoras</li> <li>• Trigonometry including further trig</li> <li>• Vectors</li> </ul>	<ul style="list-style-type: none"> <li>• Sequences</li> <li>• Units and proportionality</li> </ul>	<ul style="list-style-type: none"> <li>• Graphs</li> <li>• Equation of a circle</li> <li>• Revision</li> </ul>

	Assessment: October	Assessment: December Covering all from term 1 - 2	Assessment: February	Assessment: March Covering all from term 3 - 4	Assessment: May	Assessment: June End of year 10 Mock
Year 11 Higher	<ul style="list-style-type: none"> <li>• Direct and inverse proportion</li> <li>• Surds</li> <li>• Standard form</li> <li>• Data Handling</li> <li>• Sequences</li> <li>• Similar shapes</li> </ul> <p>October Assessment: Mock Paper 1 and 2</p>	<ul style="list-style-type: none"> <li>• Percentages</li> <li>• Venn Diagrams</li> <li>• <math>Y = mx + c</math></li> <li>• Simultaneous equations</li> <li>• Non-linear graphs</li> <li>• Transformations of functions</li> <li>• Ratio and proportion</li> </ul> <p>November December Assessment: Mock Paper 1, 2 and 3</p>	<ul style="list-style-type: none"> <li>• Vectors</li> <li>• Circle theorem proofs</li> <li>• Pythagoras and Trig</li> <li>• Indices</li> <li>• Capture and recapture</li> <li>• Compound units</li> </ul> <p>Assessment: March Papers within the lessons</p>	<ul style="list-style-type: none"> <li>• Algebra Revision</li> <li>• Shape, space and measures revision</li> <li>• Handling data revision</li> <li>• Number revision</li> </ul> <p>Assessment: April Papers within the lessons</p>	<ul style="list-style-type: none"> <li>• Algebra Revision</li> <li>• Shape, space and measures revision</li> <li>• Handling data revision</li> <li>• Number revision</li> </ul>	
Year 9 Foundation	<ul style="list-style-type: none"> <li>• Calculations</li> <li>• Terms and expressions</li> <li>• Indices</li> <li>• Expanding and factorising single brackets</li> <li>• Angles and polygons</li> </ul> <p>Assessment: October</p>	<ul style="list-style-type: none"> <li>• Handling data 1</li> <li>• Fractions, decimals and percentages</li> <li>• Formulae and functions</li> </ul> <p>Assessment: December Topics covered in term 1 and 2</p>	<ul style="list-style-type: none"> <li>• Formulae and functions</li> <li>• Working in 2D</li> <li>• Transformations</li> </ul> <p>Assessment: February</p>	<ul style="list-style-type: none"> <li>• Transformations</li> <li>• Probability</li> </ul> <p>Assessment: April Topics covered in term 3 and 4</p>	<ul style="list-style-type: none"> <li>• Measures and accuracy</li> <li>• Equations and inequalities</li> </ul> <p>Assessment: May</p>	<ul style="list-style-type: none"> <li>• Revision on all topics</li> </ul> <p>Assessment: June. End of year assessment on all topics</p>
Year 10 Foundation	<ul style="list-style-type: none"> <li>• Equations and Inequalities</li> <li>• Circles and constructions</li> </ul>	<ul style="list-style-type: none"> <li>• Factors, powers and roots</li> <li>• Graphs</li> <li>• Working in 3D</li> </ul>	<ul style="list-style-type: none"> <li>• Handling data 2</li> <li>• Indices</li> <li>• Standard form</li> </ul>	<ul style="list-style-type: none"> <li>• Standard for,</li> <li>• Graphs</li> </ul>	<ul style="list-style-type: none"> <li>• Pythagoras and trig</li> <li>• Combined events</li> </ul>	<ul style="list-style-type: none"> <li>• Sequences</li> <li>• Units and proportionality</li> </ul>

	<ul style="list-style-type: none"> <li>Ratio and proportion</li> </ul> <p>Assessment: October</p>	<p>Assessment:</p> <p>December Topics covered in term 1 and 2</p>	<p>Assessment: February</p>	<p>Assessment: April</p> <p>Topics covered in term 3 and 4</p>	<p>Assessment: May</p>	<ul style="list-style-type: none"> <li>Revision on all topics</li> </ul> <p>Assessment: End of year 10 Mock</p>
Year 11 Foundation	<ul style="list-style-type: none"> <li>Numbers</li> <li>Standard form</li> <li>Angles in parallel lines and shapes</li> <li>Congruence and similar shapes</li> <li>Algebra</li> </ul> <p>Assessment: Mock Paper 1 and 2</p>	<ul style="list-style-type: none"> <li>Proportion</li> <li>Bearings</li> <li>Fractions</li> <li>Simultaneous equations</li> <li>Venn diagrams</li> <li>Using a calculator</li> </ul> <p>Assessment: Mock Paper 1, 2 and 3</p>	<ul style="list-style-type: none"> <li>Perimeter and area</li> <li>Straight line graphs</li> <li>Averages</li> <li>Area and circumference of a circle</li> <li>Constructions and Loci</li> <li>Percentages</li> </ul> <p>Assessment: Papers within the lessons</p>	<ul style="list-style-type: none"> <li>Volume of prisms and surface area</li> <li>Real life graphs</li> <li>Quadratic graphs</li> <li>Transformations</li> <li>Ratio and proportion</li> <li>Scatter diagrams</li> <li>Probability</li> </ul> <p>Assessment: Papers within the lessons</p>	<ul style="list-style-type: none"> <li>Pythagoras and trig</li> <li>Formulae</li> <li>Revision on all topics</li> </ul>	
Year 12	<ul style="list-style-type: none"> <li>Algebraic expressions</li> <li>Quadratics</li> <li>Equations and inequalities</li> </ul> <p>Assessment Topic based</p>	<ul style="list-style-type: none"> <li>Graphs</li> <li>Straight lines</li> <li>Circles</li> <li>Forces</li> </ul> <p>Assessment Topic based</p>	<ul style="list-style-type: none"> <li>Algebraic methods</li> <li>Binomial expansion</li> <li>Newton's laws</li> </ul> <p>Assessment Full mock on all topics</p>	<ul style="list-style-type: none"> <li>Trigonometry</li> <li>Vectors</li> <li>Differentiation</li> <li>Statistics processes</li> </ul> <p>Assessment Topic based</p>	<ul style="list-style-type: none"> <li>Integration</li> <li>Exponential functions</li> <li>Statistics processes</li> </ul> <p>Assessment Topic based</p>	<p>Additional mechanics and statistics</p> <p>Assessment Full mock on all topics</p>
Year 13	<ul style="list-style-type: none"> <li>Algebraic functions</li> <li>Partial fractions</li> <li>Parametric equations.</li> <li>Sequences</li> <li>Forces</li> </ul>	<ul style="list-style-type: none"> <li>Trigonometry</li> <li>Differentiation</li> <li>Integration</li> <li>Probability</li> </ul> <p>Assessment Topic based</p>	<ul style="list-style-type: none"> <li>Numerical methods</li> <li>Vectors</li> <li>Proof</li> <li>Revision</li> </ul> <p>Assessment Full mock on all topics</p>	<ul style="list-style-type: none"> <li>Revision</li> <li>Assessment Full mock on all topics</li> </ul>	<ul style="list-style-type: none"> <li>General Revision</li> </ul>	



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	<b>Assessment Topic based</b>					
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