



Year 10 Curriculum Overview

Rationale: The Year 10 curriculum is designed to give students the opportunity to extend their existing knowledge and apply that knowledge to explore new topics in Maths. This ensures critical thinking and problem solving skills are developed to prepare them for lifelong learning and their GCSE examinations. Students will develop exam techniques through regular exposure to GCSE style questions and will be assessed through end of module examinations. Revision and Recap weeks are embedded per half term to provide a cyclical approach to learning, covering previously taught content from year 9.

Term/Length of Time	Outline	Assessment/Teacher Feedback Opportunities	Homework and Literacy resources								
Autumn 7 lessons per fortnight for approximately 15 weeks. Approx 7 weeks	Module 9 – Mensuration and Calculation Non-Right Angled Triangles, Volume, Area This completes the second part of this unit, with more on trigonometry, and the volume of 3d shapes. <ul style="list-style-type: none"> The sine and cosine rule; area of triangles Area of 2d shapes, inc surface area and sectors, segments Volume of all 3d shapes, including cones, spheres and pyramids Applying Pythagoras to 2d and 3d problems 	<i>FAR Homework will be marked by the teacher where feedback will be provided, an action will be given for students to improve and the teacher will check the response to feedback is completed.</i> Module 9 Assessment At the end of every module students sit an end of module assessment, covering all aspects taught and some prior learning from previous modules. All Year 10 students sit the Module assessments in exam conditions in their classrooms. Assessments are out of 50 marks. Assessments are marked by the class teacher, fed back to students, who have the opportunity to improve their work. A personalised checklist is then completed by the student on the front of the test for them to use in their future revision.	Minimum homework expectation - to be set on Go for Schools Home learning is set weekly in Maths throughout Year 10 Two/Three FAR (Feedback, Action, Response) homework tasks to be set over the course of a module. FAR homework sheets all follow the same format as seen below: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">KS4 FAR HOME LEARNING GREEN/YELLOW/ORANGE</th> </tr> </thead> <tbody> <tr> <td>MODULE : Linked to the module students are currently working on in lessons</td> </tr> <tr> <td>Context: Title linked to the skill(s) included</td> </tr> <tr> <td>Due Date:</td> </tr> <tr> <td>Literacy: Students will be expected to write in full sentences in the literacy section. This also may require some research.</td> </tr> <tr> <td>Revisiting: This section includes a range of questions from previously taught topics in the GCSE course, this could be from Year 9 or Year 10.</td> </tr> <tr> <td>Assessment Objective 1 (AO1) Key Knowledge: This section includes a range of 1 or 2 mark questions which we call A01. These questions often require minimal methods.</td> </tr> <tr> <td>AO2/AO3 Problem Solving: This section includes questions that are often 2-6 mark questions that require students to include their methods and processes to gain full marks. These questions are often problem solving, real life and application style questions.</td> </tr> </tbody> </table> Non - FAR homework will be set each week (when a FAR is not set). Types of Non FAR home work may include: <ul style="list-style-type: none"> Worksheets – for consolidation or flipped learning purposes. 	KS4 FAR HOME LEARNING GREEN/YELLOW/ORANGE	MODULE : Linked to the module students are currently working on in lessons	Context: Title linked to the skill(s) included	Due Date:	Literacy: Students will be expected to write in full sentences in the literacy section. This also may require some research.	Revisiting: This section includes a range of questions from previously taught topics in the GCSE course, this could be from Year 9 or Year 10.	Assessment Objective 1 (AO1) Key Knowledge: This section includes a range of 1 or 2 mark questions which we call A01. These questions often require minimal methods.	AO2/AO3 Problem Solving: This section includes questions that are often 2-6 mark questions that require students to include their methods and processes to gain full marks. These questions are often problem solving, real life and application style questions.
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		<p>Revising for Maths: There are many ways students can revise for Maths:</p> <ul style="list-style-type: none"> • Use a revision website such as MathsGenie or CorbettMaths • Create Flash Cards • Use a revision guide • Practice Exam Papers • Learn all maths formulae • Create mind maps/posters 	<ul style="list-style-type: none"> • Revision • Research • Using websites/apps <p><i>These may be marked by the teacher, self-marked by the student or if using a website/app or peer marked in lessons with teacher guidance.</i></p> <p>Optional homework tasks and Literacy resources Module Instruction Sheets will be uploaded by teachers that include videos, exam questions and answers linked to the module being taught in lessons. Module Instruction sheets are colour coded and represent the following: Foundation topics/concepts – Orange – Grade 1-4 Cross over topics/concepts – Yellow = Grades 4-5 Higher only content –Green – Grade 5+ All module instruction sheets for Maths GCSE can be found here on the school portal (student school user details required)</p> <p>Module 9 Links to aid revision Higher: (Grade 6+) Trigonometry – SINE rule Trigonometry – COSINE rule Higher and Foundation: (4/5) Trigonometry – SOHCAHTOA Foundation: (Grades 1 -3) Area and Perimeter</p> <p>Oak National Academy lessons and resources Pythagoras Trigonometry 1</p> <p>Recommended Reading Murderous Maths – Numbers: The Key to the Universe by Kjartan Poskitt</p>
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<p>Approx 7 weeks</p>	<p>Module 10 – Equations and Inequalities Now is the time for abstract mathematics. Algebra can and will be used in a variety of ways for their maths exam and students must know how to effectively manipulate and use it effectively. This module builds upon module 3 on algebraic manipulation, and now students must be able to solve complex problems as well.</p> <ul style="list-style-type: none"> • Linear and Quadratic Equations • Linear and Quadratic Simultaneous Equations • Linear and Quadratic Inequalities • Changing the subject of a formula • Setting up Equations • Completing the square 	<p><i>FAR Homework will be marked by the teacher where feedback will be provided, an action will be given for students to improve and the teacher will check the response to feedback is completed.</i></p> <p>Module 10 Assessment 60 minutes in lesson Students will receive strengths and areas for development.</p>	<p>Optional homework tasks and Literacy resources Module Instruction Sheets will be uploaded by teachers that include videos, exam questions and answers linked to the module being taught in lessons. Module Instruction sheets are colour coded and represent the following: Foundation topics/concepts – Orange – Grade 1-4 Cross over topics/concepts – Yellow = Grades 4-5 Higher only content – Green – Grade 5+ All module instruction sheets for Maths GCSE can be found here on the school portal (student school user details required)</p> <p>Module 10 Links to aid revision Higher: (Grade 6+) Quadratic Formulae Quadratic Inequalities Completing the square</p> <p>Higher and Foundation: (Grade 4/5) Inequalities Changing the subject of a formulae</p> <p>Foundation: (Grades 1-3) One step equations Solving equations</p> <p>Oak National Academy lessons and resources Quadratics Completing the Square</p>
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<p>Spring 7 lessons a fortnight for approximately 12 weeks</p> <p>Approx 3 weeks</p>	<p>Module 11 – Measures and Accuracy Consolidating the number and fraction/decimal/percentage module, this topic ensures application with real life problems involving the following topics:</p> <ul style="list-style-type: none"> • Rounding • Significant Figures • Estimation • Bounds • Metric and Imperial Measures • Conversions 	<p><i>FAR Homework will be marked by the teacher where feedback will be provided, an action will be given for students to improve and the teacher will check the response to feedback is completed.</i></p> <p>Module 11 Assessment 60 minutes in lesson Students will receive strengths and areas for development.</p>	<p>Optional homework tasks and Literacy resources Module Instruction Sheets will be uploaded by teachers that include videos, exam questions and answers linked to the module being taught in lessons. Module Instruction sheets are colour coded and represent the following: Foundation topics/concepts – Orange – Grade 1-4 Cross over topics/concepts – Yellow = Grades 4-5 Higher only content – Green – Grade 5+ All module instruction sheets for Maths GCSE can be found here on the school portal (student school user details required)</p> <p>Module 11 Links to aid revision Higher: (Grade 6+) Bounds</p> <p>Foundation: (Grades 1-3) Rounding Estimation</p> <p>Oak National Academy lessons and resources Bounds Significant figures</p> <p>Recommended Reading 50 Mathematical Ideas You Really Need to Know – Tony Crilly</p>
<p>Approx 3 weeks</p>	<p>Module 12 – Ratio, Proportion and Rates of Change</p>	<p><i>FAR Homework will be marked by the teacher where feedback will be provided, an action will be given for students to improve and the</i></p>	<p>Optional homework tasks and Literacy resources Module Instruction Sheets will be uploaded by teachers that include videos, exam questions and answers linked to the module being taught in lessons. Module Instruction sheets are colour coded and represent the following:</p>

	<p>One of the key topics for Year 10 – students will see how to manipulate ratio's and the use of proportion but incorporate these into solving problems involving shape, algebra and statistics. Significant topics include:</p> <ul style="list-style-type: none"> • Simplifying, equivalence in ratio • Use of bar modelling with ratio • Direct and inverse proportion • Application of ratio to prior learning 	<p><i>teacher will check the response to feedback is completed.</i></p> <p>Module 12 Assessment 60 minutes in lesson Students will receive strengths and areas for development.</p>	<p>Foundation topics/concepts – Orange – Grade 1-4 Cross over topics/concepts – Yellow = Grades 4-5 Higher only content –Green – Grade 5+ All module instruction sheets for Maths GCSE can be found here on the school portal (student school user details required)</p> <p>Module 12 Links to aid revision Higher: (Grade 6+) Finding the difference between two ratios</p> <p>Higher and Foundation: (Grade 4/5) Writing a Ratio as a Fraction or a Linear Function</p> <p>Foundation: (Grades 1-3) Writing and simplifying ratio</p> <p>Oak National Academy lessons and resources Ratio 1 Foundation Ratio 1 and 2</p>
Approx 4 weeks	<p>Module 13 – Statistics</p> <p>Ensuring all topics in statistics are fully mastered. Topics include:</p> <ul style="list-style-type: none"> • Averages • Measures of Spread • Scatter graphs 	<p><i>FAR Homework will be marked by the teacher where feedback will be provided, an action will be given for students to improve and the teacher will check the response to feedback is completed.</i></p>	<p>Optional homework tasks and Literacy resources</p> <p>Module Instruction Sheets will be uploaded by teachers that include videos, exam questions and answers linked to the module being taught in lessons.</p> <p>Module Instruction sheets are colour coded and represent the following: Foundation topics/concepts – Orange – Grade 1-4 Cross over topics/concepts – Yellow = Grades 4-5 Higher only content –Green – Grade 5+ All module instruction sheets for Maths GCSE can be found here on the school portal (student school user details required)</p>

	<ul style="list-style-type: none"> • Frequency Polygons • Cumulative frequency • Box Plots • Histograms 	<p>Module 13 Assessment 60 minutes in lesson Students will receive strengths and areas for development.</p>	<p>Module 13 Links to aid revision Higher: (Grade 6+) Histograms Cumulative frequency Higher and Foundation: (Grade 4/5) Averages from frequency tables Foundation: (Grades 1-3) Averages Pie Charts</p> <p>Oak National Academy lessons and resources Univariate data – (lessons 5 – 12) Scatter graphs – (lessons 5-7)</p> <p>Recommended Reading Can you Solve my Problems? By Alex Bellos</p>
<p>Summer 7 lessons a fortnight for approximately 12 weeks</p> <p>Approx 7 weeks</p>	<p>Module 14 – Graphs ALGEBRAIC</p> <p>This module builds upon the work students learn in Year 9 from real life graphs and extends to more abstract concepts. Topics include:</p> <ul style="list-style-type: none"> • Linear Graphs; gradient, y intercept, 	<p><i>FAR Homework will be marked by the teacher where feedback will be provided, an action will be given for students to improve and the teacher will check the response to feedback is completed.</i></p>	<p>Optional homework tasks and Literacy resources Module Instruction Sheets will be uploaded by teachers that include videos, exam questions and answers linked to the module being taught in lessons. Module Instruction sheets are colour coded and represent the following: Foundation topics/concepts – Orange – Grade 1-4 Cross over topics/concepts – Yellow = Grades 4-5 Higher only content – Green – Grade 5+ All module instruction sheets for Maths GCSE can be found here on the school portal (student school user details required)</p> <p>Module 14</p>

	<p>midpoints, plotting, equation of a line.</p> <ul style="list-style-type: none"> • Quadratic Graphs • Using graphs to solve equations • Linear and Quadratic Inequalities • Parallel and Perpendicular Lines • Transformation of graphs. 	<p>Module 14 Assessment 60 minutes in lesson Students will receive strengths and areas for development.</p>	<p>Links to aid revision Higher: (Grade 6+) Transformation of graphs Higher and Foundation: (Grade 4/5) Drawing quadratic graphs Foundation: (Grades 1-3) Drawing linear graphs</p> <p>Oak National Academy lessons and resources Straight Line Graphs Quadratic Graphs</p>
Approx 4 weeks	<p>EOY Revision – Time in lessons will be spent on closely GAPS from previously taught modules (Module 1 -12) in preparation for the end of year Maths Assessment</p>	<p>End of Year Maths Exam (1 paper – Calculator) This assessment/mock will be sat in the hall in exam conditions and marked by the Maths teacher. Students will have opportunities to go through the papers and improve in lessons.</p>	<p>End of year revision requires students to look back on their work and practice exam style questions. Students will attempt these in class as well as practice papers. Excellent revision materials can be found here: Past Papers Graded Revision Materials with Videos and Worksheets, with solutions Individual Topic List – students should use their Personal Learning Checklists to identify topics in need of revision</p>