

Calendar	Topic	Assessment	Sequencing and Coherence <i>concepts - themes - skills</i>	Literacy <i>reading - vocabulary - oracy - writing</i>
Autumn Term Half Term 1	Similarity [1] Congruency and Similarity [2] Right-angled triangles	Formative Assessments <i>10-15 Minutes in-class</i> [1] Congruency and Similarity	<u>Congruency, similarity and Enlargement</u> This unit build on the work covered on enlargement and similarity in Year 9, but extends pupils' experience by looking more formally at similar triangles and proof. Parallel lines are also revisited to support similarity. Some pupils will also cover congruency through formal proof. Previous Knowledge - Enlarge by a positive scale factor - Identify similar shapes <u>Right-Angled Triangles</u> For this unit of work, teachers can look to introduce trigonometry through similar triangles (linking with the previous topic). This key topic is introduced here so that there is time to allow regular revising throughout Year 10 and 11 e.g. when covering bearings. Previous Knowledge - Pythagoras' Theorem	Explicit teaching of key words embedded throughout using strategies such as; entomology, synonyms and by giving examples in context. Discuss misconceptions, opportunities to write and explain formal mathematic proof. Oracy Opportunities -What's the same what's different? - Spot the mistake - Do you agree or disagree? - True or False - Always, sometimes, never

<p style="text-align: center;">Autumn Term</p> <p style="text-align: center;">Half Term 2</p>	<p>Developing Algebra</p> <p>[1] Expressions [2] Equations and Inequalities [3] Simultaneous Equations</p>	<p>Formative Assessments <i>10-15 Minutes in-class</i></p> <p>[1] Right angled triangles [2] Expressions</p>	<p><u>Expressions</u> This block builds on previous knowledge of expressions and indices and prepares pupils for using these skills when solving more complex equations/inequalities in the next block. Higher pupils will also be introduced to quadratics here before moving onto applying these skills to quadratic equations. Previous Knowledge - Simplifying expressions - Expanding and factorising linear expressions</p> <p><u>Equations and Inequalities</u> Pupils will have covered both equations and inequalities thoroughly at KS3 and this unit reinforces standard techniques to deepen understanding. The unit emphasises forming equations from given information, which provides pupils with an excellent opportunity to revisit other topics in the curriculum e.g. angles, area, probability. Previous Knowledge - Two step equations and inequalities - Form and solve equations</p> <p><u>Simultaneous Equations</u> Following from the previous topic, pupils now move on to the solution of simultaneous equations starting with finding solutions, substitution and then elimination. Previous Knowledge - Directed number - One and two step equations - Substitution</p>	<p>Explicit teaching of key words embedded throughout using strategies such as; entomology, synonyms and by giving examples in context.</p> <p>Opportunities to decipher and infer keywords to form and solve equations/inequalities</p> <p>Oracy Opportunities - Discuss misconceptions - Spot the mistake - Inference</p>
---	---	---	--	--

<p style="text-align: center;">Spring Term</p> <p style="text-align: center;">Half Term 3</p>	<p>Geometry</p> <p>[1] Angles & Bearings [2] 2D and 3D Shapes</p>	<p>Formative Assessments <i>10-15 Minutes in-class</i></p> <p>[1] Equations and Inequalities</p> <p>Summative Assessment One non-calculator and two calculator papers, based on topics covered so far (including topics covered at KS3). These will be reduced GCSE exam papers, with content not covered removed. Grade Boundaries may be reduced by up to 10% to accommodate this.</p>	<p><u>Angles & Bearings</u> In addition to a formal approach to bearings, this block provides opportunity to revisit other curriculum areas e.g. parallel lines, accurate drawings, scales which have all been covered at KS3. Pupils will also reinforce their understanding of trigonometry and Pythagoras from earlier this year.</p> <p>Previous Knowledge</p> <ul style="list-style-type: none"> - Scale diagrams - Cardinal directions <p><u>2D and 3D Shapes</u> This topic introduces new content whilst expending prior learning of area and volume of 2D shapes and prisms. The formulae for finding areas of sectors and arc lengths are built upon from previous knowledge of fractions. Higher pupils will also enhance their knowledge of volumes of sphere and cones and area and volume ratios.</p> <p>Previous Knowledge</p> <ul style="list-style-type: none"> - Parts of a circle - Similar shapes 	<ul style="list-style-type: none"> - Explicit teaching of key words embedded throughout using strategies such as; entomology, synonyms and by giving examples in context. - Revision for Assessment 1 will focus on dissecting AO3 challenging texts to ensure both context and calculations are accessible to all. - Sentence stems to support pupils in providing reasons for angle rules. - Discuss misconceptions, opportunities to write and explain formal mathematic proof. <p>Oracy Opportunities</p> <ul style="list-style-type: none"> -What's the same what's different? - Spot the mistake - Do you agree or disagree? - True or False - Always, sometimes, never
---	--	--	---	---

<p style="text-align: center;">Spring Term</p> <p style="text-align: center;">Half Term 4</p>	<p>Proportion</p> <p>[1] Fractions & Ratio [2] Percentage & Interest [3] Probability</p>	<p>Formative Assessments <i>10-15 Minutes in-class</i></p> <p>[1] Angles & Bearings [2] 2D and 3D Shapes</p> <p>Summative Assessments Pupil next steps and use of retrieval starters based on results from Assessment 1</p>	<p><u>Ratio & Fractions</u> This unit of work builds on the KS3 work on ratio and fractions, but focuses more on the reasoning and understanding notation to support increasingly complex problems that have to be represented in a variety of forms. Previous Knowledge</p> <ul style="list-style-type: none"> - Links ratio to fractions - Sharing in a ratio - Scales and ratio <p><u>Percentages and Interest</u> This block continues to build on understanding of percentages covered at KS3. Calculator methods will be encouraged, particularly with higher pupils. Use of financial contexts is a focus in this block, helping pupils maintain familiarity with the vocabulary they are likely to use outside of school. Previous Knowledge</p> <ul style="list-style-type: none"> - Percentages of amounts - Increase and decrease - Expressing a number as a percentage of another <p><u>Probability</u> This block also builds of KS3 by revising fraction arithmetic and FDP conversion. Tables and Venn diagrams are also revisited and understanding and use of tree diagrams is developed both at foundation and higher tier. Previous Knowledge</p> <ul style="list-style-type: none"> - Equally likely outcome - Probability sum to 1 	<ul style="list-style-type: none"> - Explicit teaching of key words embedded throughout using strategies such as; entomology, synonyms and by giving examples in context. - Pupils will be encouraged to use Tier 2 and 3 vocabulary when describing probabilities <p>Oracy Opportunities</p> <ul style="list-style-type: none"> -What's the same what's different? - Spot the mistake - Do you agree or disagree? - True or False - Always, sometimes, never
---	---	---	--	---

<p style="text-align: center;">Summer Term</p> <p style="text-align: center;">Half Term 5</p>	<p>Delving into Data</p> <p>[1] Collecting and representing data [2] Vectors</p>	<p>Formative Assessments <i>10-15 Minutes in-class</i></p> <p>[1] Fractions & Ratios [2] Percentage & Interest</p> <p>Summative Assessments One non-calculator and one calculator paper GCSE exam paper.</p>	<p><u>Collecting and representing data</u> Whilst this unit of work does build on prior learning from KS3, the focus here is to extend and deepen understanding, particularly in terms of interpretation of results and evaluating/criticising statistical diagrams. As such, written skills and oracy is a focus throughout this unit of work.</p> <p>Previous Knowledge</p> <ul style="list-style-type: none"> - Constructing two-way tables - Time series graphs - Averages from a list and a table - Scatter Graphs <p><u>Vectors</u> Pupils will have met vectors to describe translations at KS3 and this will be revisited alongside more formal notation of vectors. Higher pupils will then use this understanding to develop geometric proof (which involves links to properties of shapes and parallel lines).</p> <p>Previous Knowledge</p> <ul style="list-style-type: none"> - Understand a column vector 	<ul style="list-style-type: none"> - Explicit teaching of key words embedded throughout using strategies such as; entomology, synonyms and by giving examples in context. - Emphasis on written skills when explaining and interpreting box plots and averages. Possible use of writing frames to support some pupils with tier 2 and 3 vocabulary. - Revision for Assessment 2 will focus on dissecting AO3 challenging texts to ensure both context and calculations are accessible to all.
---	---	--	--	--

<p style="text-align: center;">Summer Term</p> <p style="text-align: center;">Half Term 6</p>	<p>Using Number</p> <p>[1] Non-calculator Methods [2] Sequences and types of number</p>	<p>Formative Assessments <i>10-15 Minutes in-class</i></p> <p>[1] Collecting and Representing Data [2] Vectors</p> <p>Summative Assessments One calculator GCSE paper.</p>	<p><u>Non-calculator methods</u> This unit of work builds on prior knowledge of mental methods and formal methods. The four operations for integers, decimals and fractions is revisited but will be covered through multi-step problems in preparation for GCSE questions. Higher pupils will look to cover surds in detail during this unit to, which will be revisited and linked to sequences and indices later this term.</p> <p><u>Previous Knowledge</u></p> <ul style="list-style-type: none"> - Mental and formal methods for integers, decimals and fractions - Mixed rounding and estimating <p><u>Sequences and Types of number</u> This unit of work again mainly revises KS3 content, but with a focus on GCSE style problems. Sequences will be extended for higher tier pupils to include surds and quadratics (both covered in detail earlier in Year 10).</p> <p><u>Previous Knowledge</u></p> <ul style="list-style-type: none"> - Factors and multiples - HCF and LCM - nth term of a linear sequence 	<ul style="list-style-type: none"> - Explicit teaching of key words embedded throughout using strategies such as; etymology, synonyms and by giving examples in context. - Revision for Assessment 2 will focus on dissecting AO3 challenging texts to ensure both context and calculations are accessible to all. <p>Oracy Opportunities</p> <ul style="list-style-type: none"> - What's the same what's different? - Spot the mistake - Do you agree or disagree? - True or False - Always, sometimes, never
---	--	--	--	--