

Calendar	Topic	Assessment	Sequencing and Coherence <i>concepts - themes - skills</i>	Literacy <i>reading - vocabulary - oracy - writing</i>
Autumn Term Half Term 1	Proportional Reasoning [1] Ratio and Scale [2] Multiplicative Change [3] Multiplying and Dividing Fractions	Formative Assessments <i>10-15 Minutes in-class</i> [1] Ratio and Scale [2] Multiplicative Change Summative Assessments One non-calculator paper based on topics covered so far (including some key topics from Y7 and the KS2 NC)	<u>Ratio and Scale</u> This is a new topic to start Year 8. This unit of work links to skills needed when simplifying and equivalent fractions (from Year 7) but allows pupils to develop both pictorial and abstract approaches to problem solving. <u>Multiplicative Change</u> In this unit, pupils will work with the link between ratio and scaling (from previous topic) to explore direct proportion. Some pupils will also have the opportunity to revisit graphical representations in Year 10 to explore direct proportion graphs. <u>Multiplying and Dividing Fractions</u> Here pupils will develop a deepened understanding of multiplying and dividing fractions (as many pupils will have had little experience of this at KS2). Links between fractions and decimals are also revisited. Pupils following our 'extension' objectives will also revisit algebraic expressions by multiplying and dividing algebraic fractions.	Explicit teaching of key words embedded throughout using strategies such as; entomology, synonyms and by giving examples in context. Encourage pupils to use the glossary when completing formative assessments in lessons. Discuss misconceptions and draw and discuss conclusions through mathematical thinking. Oracy Opportunities -Discuss misconceptions through concept cartoons -What's the same what's different? - Spot the mistake - Do you agree or disagree? - True or False - Always, sometimes, never - Choral chanting of new tier 3 vocab

<p style="text-align: center;">Autumn Term</p> <p style="text-align: center;">Half Term 2</p>	<p>Representations</p> <p>[1] Cartesian Plane</p> <p>[2] Representing Data</p> <p>[3] Tables and Probability</p>	<p>Formative Assessments <i>10-15 Minutes in-class</i></p> <p>[1] Cartesian Plane</p> <p>[2] Representing Data</p> <p>Summative Assessments Pupil next steps and use of retrieval starters based on results from Assessment 1</p>	<p><u>Cartesian Plane</u> In this unit of work, pupils will build on their knowledge of coordinates from KS2 by looking at more formal algebraic rules for straight lines, gradients and intercepts. Pupils will have the opportunity to appreciate the similarities and differences between sequences (covered in Year 7).</p> <p><u>Representing Data</u> In this unit, pupils extend on their knowledge of graphs and charts from KS2 by being introduced formally to the idea of correlation, discrete and continuous data. More emphasis will be placed on interpreting throughout the next topic.</p> <p><u>Tables and Probability</u> Building from Y7, this block of work reminds pupils of the ideas of probability by looking in more depth at the use of tables to represent these. There will be a big focus on pupils using the correct Tier 3 vocabulary throughout this unit of work.</p>	<p>Explicit teaching of key words embedded throughout using strategies such as; entomology, synonyms and by giving examples in context.</p> <p>Encourage pupils to use the glossary when completing formative assessments in lessons.</p> <p>Oracy Opportunities</p> <ul style="list-style-type: none"> -Discuss misconceptions through concept cartoons -What's the same what's different? - Do you agree or disagree? - True or False - Sentence stems to support interpreting data - Choral chanting of new tier 3 vocab
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<p style="text-align: center;">Spring Term</p> <p style="text-align: center;">Half Term 3</p>	<p>Algebraic Techniques</p> <p>[1] Brackets, equations and Inequalities</p> <p>[2] Sequences</p> <p>[3] Indices</p>	<p>Formative Assessments <i>10-15 Minutes in-class</i></p> <p>[1] Tables and Probability</p> <p>[2] Brackets, Equations and Inequalities</p> <p>[3] Sequences</p>	<p><u>Brackets, Equations and Inequalities</u> Pupils will build the foundation covered in Year 7 on equivalence to expand single brackets and factorise expressions before building on previous work on equations to introduce inequalities.</p> <p><u>Sequences</u> This unit of work reinforces pupils' learning from the start of Year 7, extending this knowledge to look at sequences with more complex algebraic rules.</p> <p><u>Indices</u> Extending upon simplifying expressions from Year 7, this unit of work lays the groundwork of making sure pupils are comfortable with expressions involving indices. This will also be revisited throughout 'Standard Form'.</p>	<p>Explicit teaching of key words embedded throughout using strategies such as; entomology, synonyms and by giving examples in context</p> <p>Encourage pupils to use the glossary when completing formative assessments in lessons.</p> <p>Oracy Opportunities</p> <ul style="list-style-type: none"> -Discuss misconceptions through concept cartoons - Discuss and prove algebraic conjectures through reasoning - True or False - Always, sometimes, never discussions - Choral chanting of new tier 3 vocab
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<p style="text-align: center;">Spring Term</p> <p style="text-align: center;">Half Term 4</p>	<p>Developing Number</p> <p>[1] Fractions and Percentages</p> <p>[2] Standard Form</p> <p>[3] Number Sense</p>	<p>Formative Assessments <i>10-15 Minutes in-class</i></p> <p>[1] Indices</p> <p>[2] Fractions and Percentages</p> <p>[3] Standard Form</p>	<p><u>Fractions and Percentages</u></p> <p>This unit of works covers the relationships between fractions and percentages in more detail than that of Y7. Both calculator and non-calculator methods are used throughout. Financial maths is also developed here through the contexts of profit and loss.</p> <p><u>Standard Form</u></p> <p>For some pupils, this unit of work reinforces Standard Form from Y7, but at this point, all pupils are now introduced to working with numbers in standard form. This unit also links to the earlier topic of indices.</p> <p><u>Number sense</u></p> <p>This block provides opportunity to revisit a lot of basic skills in a wide range of real-life contexts. Estimation will also be revisited here to deepen mental strategies (covered in Y7). Pupils will also look explicitly at solving problems using the time and the calendar as this area of the KS3 curriculum is sometimes neglected leaving gaps in pupil knowledge.</p>	<p>Encourage pupils to use the glossary when completing formative assessments in lessons.</p> <p>Explicit teaching of key words embedded throughout using strategies such as; entomology, synonyms and by giving examples in context</p>
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<p>Summer Term</p> <p>Half Term 5</p>	<p>Developing Geometry</p> <p>[1] Angles in parallel lines and polygons [2] Area [3] Line symmetry and reflection</p>	<p>Formative Assessments <i>10-15 Minutes in-class</i></p> <p>[1] Number sense [2] Angles in parallel lines</p> <p>Summative Assessments One non-calculator paper and one calculator based on topics covered so far in Y8 (including some key topics from Y7)</p>	<p><u>Angles in parallel lines and polygons</u> This block builds on KS2 and Year 7 by understanding of angle notation and relationships, but extends all pupils by exploring angles in parallel lines and connected properties of polygons.</p> <p><u>Area</u> Pupils will revisit area of basic shapes (KS2 NC) then many pupils will move onto finding the area of a trapezium and circles. A key aspect of this unit will involve pupils being able to identify the correct formulae and apply appropriately.</p> <p><u>Line symmetry and reflection</u> The teaching of reflection has been separated from the other transformations here to ensure that pupils develop a deeper understanding of this concept and avoid mixing this up with other concepts. This topic also reinforces graphical representations through $y =$ and $x =$ mirror lines.</p>	<p>Encourage pupils to use the glossary when completing formative assessments in lessons.</p> <p>Explicit teaching of key words embedded throughout using strategies such as; entomology, synonyms and by giving examples in context</p> <p>Writing frames may be used with some classes to support pupils in communicating chains of reasoning when covering angles in parallel lines and polygons.</p> <p>Oracy Opportunities</p> <ul style="list-style-type: none"> -Discuss misconceptions through concept cartoons - Do you agree or disagree? - True or False - Sentence stems to support pupils in providing reasons for angle problems - Choral chanting of new tier 3 vocab
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<p>Summer Term</p> <p>Half Term 6</p>	<p>Reasoning with Data</p> <p>[1] The data handling cycle [2] Measures of Location</p>	<p>Formative Assessments <i>10-15 Minutes in-class</i></p> <p>[1] Area [2] Line symmetry and reflection</p> <p>Summative Assessments Pupil next steps and use of retrieval starters based on results from Assessment 2</p>	<p><u>The data handling cycle</u> This unit extend upon the skills covered in the earlier 'Representing Data' topic by comparing different distributions and by considering how real-life contexts can be misleading. Pupils will also develop communication skills when looking at creating and criticising questionnaires.</p> <p><u>Measures of location</u> This unit of work extends on what pupils have already met in Year 7 (Median and mean) and introduces the mode and the range. The previous unit of work is also built on here as pupils have the opportunity to compare distributions and interpret charts such as stem and leaf diagrams.</p>	<p>Encourage pupils to use the glossary when completing formative assessments in lessons.</p> <p>Explicit teaching of key words embedded throughout using strategies such as; entomology, synonyms and by giving examples in context</p> <p>Pupils will be encouraged to use Tier 2 and 3 vocabulary when creating and criticising questionnaires throughout the data handling unit of work.</p> <p>Oracy Opportunities</p> <ul style="list-style-type: none"> -Discuss misconceptions through concept cartoons - Do you agree or disagree? - True or False - Sentence stems to support pupils in comparing distributions - Discussions around the most appropriate average and why - Choral chanting of new tier 3 vocab
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