

Curriculum intent (overview) – To deepen students’ skills and knowledge through a broad and balanced curriculum which prepares students for adulthood.

# 10n Class - Navigator Curriculum 3 hours per work.

Max 6 hours per topic.

Core mathematical facts, concepts, methods and strategies to be able to experience success when problem-solving.

Pick out keywords in (2/6 mark questions).

Year	2022 – 2023 Autumn 1 Unit 1	2022 – 2023 Autumn 2 Unit 2	2022 – 2023 Spring 1 Unit 3	2022 – 2023 Spring 2 Unit 4	2022 – 2023 Summer 1 Unit 5	2022 – 2023 Summer 2 Unit 6
	<p><b>Topic:</b> Calculation=addition and subtraction. Fractions and decimals and percentages. Measure and accuracy-Time</p> <p><b>Suggested Key Questions</b> Can you tackle a word problem based on the topic. <b>Promote core facts.</b> Do you understand place value? Can you calculate using the add/subtract operations? Can you use Bidmas in multi stage calculations?  Can students recognise, find and name a half as one of two equal parts of an</p>	<p><b>Topic:</b> Calculations/multiplication and division. Measure and accuracy-Money Working in 2d/3d.</p> <p>Multiplication of two digit numbers use grid method. Division use bus stop method.</p> <p><b>Suggested Key Questions:</b> Can you tackle a word problem based on the topic.</p> <p><b>Promote core facts</b> Do you know your 2.5.10 x tables. DO you know your 4,8 and 9 x tables. Do you know all your 12 x 12 tables. Can you Develop fluency</p>	<p><b>Topic:</b> Algebra Data and statistics Measure and accuracy-weight/capacity/volume.</p> <p><b>Suggested Key Questions:</b> Can you tackle a word problem based on the topic.</p> <p><b>Promote core facts</b> Can you extract data? Can you present data? Can you use symbols? Can you Develop fluency Reason mathematically Solve problems involving algebra. Can you Develop fluency</p>	<p><b>Topic:</b> Number Ratio/Probability/Sequence</p> <p><b>Suggested Key Questions:</b> <b>Promote core facts</b> Can you tackle a word problem based on the topic.  Can you link likelihood and chance? Can you Develop fluency Reason mathematically Solve problems involving algebra. Can you Develop fluency Reason mathematically Solve problems involving number.</p>	<p><b>Topic:</b> Calculation Fractions and decimals and percentages. Measure and accuracy.</p> <p><b>Suggested Key Questions:</b> <b>Promote core facts</b> Can you tackle a word problem based on the topic.  Can you order negative numbers? What are factors and multiples? Can you order decimal numbers? What are square numbers? Can you read scales? What is perimeter/ What is area?  <b>Can you write fraction?</b></p>	<p><b>Topic:</b> Angles and polygons Working in 2d/3d Measure and accuracy.</p> <p><b>Suggested Key Questions:</b> <b>Promote core facts</b> Can you tackle a word problem based on the topic.  Do you know what opposite angles are? Do you know about angles inside triangles? <b>Key Skills and Knowledge:</b>  Calculate and solve problems involving: perimeters of 2-D shapes (including circles), areas of circles and composite shapes  Identify and construct congruent triangles, and construct similar shapes by enlargement, with and without coordinate grids.</p>

<p>object, shape or quantity</p> <p>Can you use understanding of title, labels and simple scales? (sixth-form)</p> <p><b><u>Key Skills and Knowledge:</u></b></p> <p>Count backwards through zero to include negative numbers count in multiples of 6, 7, 9, 25 and 1000 identify, represent and estimate numbers using different representations</p> <p>Recognise, find, name and write fractions <math>\frac{3}{4}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity write simple fractions for example, <math>\frac{2}{6} = \frac{1}{3}</math> and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math>.</p> <p>Add fraction</p>	<p>Reason mathematically Solve problems involving multiplication and division. Can you Develop fluency Reason mathematically Solve problems involving money. Can you Develop fluency Reason mathematically Solve problems involving 2d/3d shapes</p> <p>Identify appropriate methods for collecting data (sixth-form)</p> <p><b><u>Key Skills and Knowledge:</u></b></p> <p>Count in multiples of 6, 7, 9, 25 and 1 000</p> <p>Recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></p> <p>Recognise and use factor pairs and commutativity in mental calculations</p> <p>Calculate and solve problems involving: perimeters of 2-D shapes (including circles), areas of circles and composite shapes</p> <p>Draw and measure line segments and angles</p> <p>Apply the properties of angles,</p>	<p>Reason mathematically Solve problems involving data and statistics. Do you know metric measure for length, mass and capacity.</p> <p>Use whole numbers, decimals and fractions and percentages to present results (sixth-form)</p> <p><b><u>Key Skills and Knowledge:</u></b></p> <p><u>Describe, interpret and compare observed distributions of a single variable through: appropriate graphical representation involving discrete, continuous and grouped data; and appropriate measures of central tendency (mean, mode, median) and spread (range, consideration of outliers).</u> construct and interpret appropriate tables, charts, and diagrams.</p> <p>Substitute numerical values into formulae and expressions, including scientific formulae.</p>	<p>Reason mathematically Solve problems involving algebra. Can you Develop fluency Reason mathematically Solve problems involving ratios, probability and sequence.</p> <p><b><u>Key Skills and Knowledge:</u></b></p> <p>Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) round any number to the nearest 10, 100 or 1 000</p> <p>Use fraction and percentages to describe a proportion.</p>	<p>Can you Develop fluency Reason mathematically Solve problems involving algebra. Can you Develop fluency Reason mathematically Solve problems involving ratios, probability and sequence.</p> <p><b><u>Key Skills and Knowledge:</u></b></p> <p>Subtract fractions Mixed numbers.</p> <p>Reinforce Count backwards through zero to include negative numbers count in multiples of 6, 7, 9, 25 and 1000 identify, represent and estimate numbers using different representations</p>	<p><b><u>Can you find equivalent fractions?</u></b></p> <p><b><u>Can you simplify fractions?</u></b></p> <p><b><u>Key Skills and Knowledge:</u></b></p> <p>Subtract fractions Mixed numbers.</p> <p>Reinforce Count backwards through zero to include negative numbers count in multiples of 6, 7, 9, 25 and 1000 identify, represent and estimate numbers using different representations</p>	<p>Derive and use the sum of angles in a triangle and use it to deduce the angle sum in any polygon, and to derive properties of regular polygons</p>
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<p>Links to Gatsby Benchmarks:</p>	<p><b><u>Benchmark 2</u></b> Labour market to information. What are the current trends in the jobs market that involve maths skills that students are learning.</p> <p><b><u>Benchmark 4.</u></b> STEM opportunities-linking career opportunities and what aspects of mathematics they are learning.</p>	<p><b><u>Benchmark 2</u></b> Labour market to information. What are the current trends in the jobs market that involve maths skills that students are learning.</p> <p><b><u>Benchmark 4.</u></b> STEM opportunities-linking career opportunities and what aspects of mathematics they are learning.</p>	<p><b><u>Benchmark 2</u></b> Labour market to information. What are the current trends in the jobs market that involve maths skills that students are learning.</p> <p><b><u>Benchmark 4.</u></b> STEM opportunities-linking career opportunities and what aspects of mathematics they are learning.</p>	<p><b><u>Benchmark 2</u></b> Labour market to information. What are the current trends in the jobs market that involve maths skills that students are learning.</p> <p><b><u>Benchmark 4.</u></b> STEM opportunities-linking career opportunities and what aspects of mathematics they are learning.</p>	<p><b><u>Benchmark 2</u></b> Labour market to information. What are the current trends in the jobs market that involve maths skills that students are learning.</p> <p><b><u>Benchmark 4.</u></b> STEM opportunities-linking career opportunities and what aspects of mathematics they are learning.</p>	<p><b><u>Benchmark 2</u></b> Labour market to information. What are the current trends in the jobs market that involve maths skills that students are learning.</p> <p><b><u>Benchmark 4.</u></b> STEM opportunities-linking career opportunities and what aspects of mathematics they are learning.</p>

Develop fluency  
Reason mathematically  
Solve problems