Traineeship

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

Promote word problems to solve GCSE (2/5 mark questions).

Apply understanding to a range of topics.

Year	2024 – 2025	2024 – 2025	2024 – 2025	2024 – 2025	2024 – 2025	2024 – 2025

Topic: **Calculation**=addition and subtraction. **Fractions and decimals and percentages.** **Measure and accuracy-** **Ratio/Rounding/estimation.** **Nth Term/prime factorisation.** **GCSE Revision.** (Teacher to select appropriate topic to meet the needs of the cohort) **Suggested Key Questions** Can you tackle a word problem based on the topic addition and subtraction? Can you measure with accuracy? Can students recognise, find and name a half as one of two equal parts of an object, shape or quantity **Key Skills and Knowledge:** •To become familiar with the	**Topic:** **Calculations/ multiplication and division.** **Angle Rules/ symmetry/circles** **Working in 2d/3d.** **Pythagorqas** **Area & Volume.** **GCSE Revision** (Teacher to select appropriate topic to meet the needs of the cohort) Multiplication of two digit numbers use grid method. Division use bus stop method. **Suggested Key Questions:** **Can you tackle multiplication and division word problems problems** Can you tackle word problems based on the topic? Can you apply you understanding to a range of GCSE questions? **Promote core facts** **Key Skills and Knowledge:**	**Topic:** **Introduction to Algebra** **Data and statistics** **Trigonometry** **GCSE Revision** (Teacher to select appropriate topic to meet the needs of the cohort) **Suggested Key Questions:** Can you tackle a word problem based on the topic. **Promote core facts** Can you apply your understanding to GCSE questions involving statistics? **Key Skills and Knowledge:** •To become familiar with algebraic notation and writing algebraic expressions. •To expand and simplify expressions, collecting like parts. •To solve algebraic equations.	**Topic:** **Bearing area, circumference of a circle.** **Inequalities & indices, similar and congurant shapes.** **Suggested Key Questions:** **Promote core facts** Can you tackle a word problem based on the topic. Can you apply your understanding to GCSE sequence/ratio and proportion questions? **Key Skills and Knowledge:** •To become familiar with bearings. •To calculate area and circumference of a circle and semi-circles. •To understand pi and keep answers in terms of pi.	**Topic:** **GCSE Exam Revision** (Teacher to select appropriate topic to meet the needs of the cohort) **Suggested Key Questions:** **Promote core facts** Can you tackle a word problem involving fractions, percentages and decimals. **Can you write fraction?** **Can you find equivalent fractions?** **Can you simpoplify fractions?** **Key Skills and Knowledge:** Use the four operations, including formal written methods, applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative Recognise and use relationships between operations including inverse operations	**Topic:** **Angles and polygons** **Working in 2d/3d** **Measure and accuracy.** **AQA Level 1 unit (teacher to select)** **Suggested Key Questions:** **Promote core facts** Can you tackle a word problem involving angles and polygons? **Key Skills and Knowledge:** 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. 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

	connections between fractions, decimals and percentages. •To be able to manipulate each form of number fluently using equivalencies and recognising they are all the same quantity of an amount. •To work with fractions, decimals and percentages as individual skill areas.	•To become familiar with a range of polygons and recognise the difference between 2d and 3d shape. •To revise elements of symmetry – rotation, reflection, translation and enlargement. •To name the common parts of a circle and work with area and circumference calculations, including arc length and understanding pi.	•To understand the index laws.			
Links to Gatsby Benchmarks:	**Benchmark 2** Labour market to information. What are the current trends in the jobs market that involve maths skils athat students are learning. **Benchmark 4.** STEM opportunities-linking career opportunities and what aspects of	**Benchmark 2** Labour market to information. What are the current trends in the jobs market that involve maths skils athat students are learning. **Benchmark 4.** STEM opportunities-linking career opportunities and what aspects of	**Benchmark 2** Labour market to information. What are the current trends in the jobs market that involve maths skils athat students are learning. **Benchmark 4.** STEM opportunities-linking career opportunities and what aspects of	**Benchmark 2** Labour market to information. What are the current trends in the jobs market that involve maths skils athat students are learning. **Benchmark 4.** STEM opportunities-linking career opportunities and what aspects of	**Benchmark 2** Labour market to information. What are the current trends in the jobs market that involve maths skils athat students are learning. **Benchmark 4.** STEM opportunities-linking career opportunities and what aspects of	**Benchmark 2** Labour market to information. What are the current trends in the jobs market that involve maths skils athat students are learning. **Benchmark 4.** STEM opportunities-linking career opportunities and what aspects of

	mathematics they are learning.	mathematics they are learning.	mathematics they are learning.	mathematics they are learning.	mathematics they are learning.	mathematics they are learning.

Develop fluency
Reason mathematically
Solve problems