

MATHEMATICS PROGRESSION DOCUMENT



Curriculum intent for Mathematics

“Our vision is to ensure that all pupils become fluent mathematicians who are able to reason mathematically and solve a range of problems using the mathematics they have learned. We want to instil a love of Mathematics in the wider world and will achieve this by using a Maths Mastery approach so that pupils acquire a deep, long term, secure and adaptable understanding of the subject.”

The aims of the Phase Progression for Mathematics are to ensure that all students:

- ✓ become fluent in the fundamentals of mathematics, through varied and frequent practice, so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. Our student’s chances of success are maximised if they develop deep and lasting understanding of mathematical procedures and concepts.
- ✓ reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- ✓ can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

The Progression Phase supports the development of maths mastery flow across the Academy.

The Mastery Flow Principles are:

1. Representation
2. Fluency
3. Probing Questions
4. Further Extension
5. Rich and Complex Principles

The phrase ‘teaching for mastery’ describes the elements of classroom practice and school organisation that combine to give pupils the best chances of mastering maths. By developing ‘Maths Mastery’ our students can work progressively to acquire a deep, long-term, secure and adaptable understanding of the subject.

LONG TERM PLAN

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
(Foundations) Stage 1	Unit 1: Number Systems (2 Weeks) Unit 2: Pattern Sniffing (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)	Unit 3: Investigating Numbers (3 Weeks) Unit 4: Exploring Shape (3 Weeks)	Unit 6: Reasoning with Measure (3 Weeks) Unit 1:12 Number Systems (2 Weeks)	Unit 12: Exploring Change (2 Weeks) Unit 3: Investigating Numbers (3 Weeks)	Unit 4: Exploring Shape (2 Weeks) Unit 1: Number Systems (2 Weeks) Unit 2: Pattern Sniffing (2 Weeks)	Unit 12: Exploring Change (2 Weeks) Unit 14: Describing position (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)
(Foundations) Stage 2,3,4 KS 1 - 4	Unit 1: Number Systems (2 Weeks) Unit 2: Pattern Sniffing (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)	Unit 3: Investigating Numbers (3 Weeks) Unit 4: Exploring Shape 3 Weeks)	Unit 6: Reasoning with Measure (3 Weeks) Unit 1: Number Systems (2 Weeks)	Unit 12: Exploring Change (2 Weeks) Unit 3: Investigating Numbers (3 Weeks)	Unit 4: Exploring Shape (1 Week) Unit 7/8: Discovering Equivalency/ Reasoning with Fractions (2 weeks) Unit 1: Number Systems (1.5 Weeks) Unit 2: Pattern Sniffing (1.5 Weeks)	Unit 12: Exploring Change (2 Weeks) Unit 14: Describing position (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)
(Functional) Stage 5 KS 2 - 3	Unit 1: Number Systems (2 Weeks) Unit 2: Pattern Sniffing (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)	Unit 3: Investigating Numbers (3 weeks) Unit 4: Exploring Shape (3 Weeks)	Unit 6: Reasoning with Measure (3 Weeks) Unit 10: Investigating Statistics (2 Weeks) U	Unit 12: Exploring Change (2 Weeks) Unit 3: Investigating Numbers (3 Weeks)	Unit 9: – Solving Problems with Number (2 Weeks) Unit 7/8: Discovering Equivalency/ Reasoning with Fractions (2 Weeks) Unit 12: Exploring Change (2 Weeks)	Unit 13: Reasoning Proportionally In (2 Weeks) Unit 14: Describing Position (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)
(Functional) Stage 6 KS 2 - 3	Unit 1: Number Systems (2 Weeks) Unit 2: Pattern Sniffing (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)	Unit 2: Pattern Sniffing (2 Weeks) Unit 3: Investigating Numbers (3 Weeks) End of Term 1 Consolidation and Assessment	Unit 4: Exploring Shape (2 Weeks) Unit 6: Reasoning with Measure (2 Weeks) Unit 5: Generalising Arithmetic (2 Weeks)	Unit 7/8: Discovering Equivalency/ Reasoning with Fractions (2 Weeks) Unit 9: – Solving Problems with Number (2 Weeks) Unit 12: Exploring Change (2 Weeks)	Unit 10: Investigating Statistics (2 Weeks) Unit 11: Visualising Shape (2 Weeks) Unit 12: Exploring Change (2 Weeks)	Unit 13: Reasoning Proportionally (2 Weeks) Unit 14: Describing Position (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)
(Functional) Stage 7 KS 2 - 3	Unit 1: Number Systems (2 Weeks) Unit 2: Pattern Sniffing (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)	Unit 2: Pattern Sniffing (2 Weeks) Unit 3: Investigating Numbers (3 Weeks) End of Term 1 Consolidation and Assessment	Unit 4: Exploring Shape (2 Weeks) Unit 6: Reasoning with Measure (2 Weeks) Unit 5: Generalising Arithmetic (2 Weeks)	Unit 7/8: Discovering Equivalency/ Reasoning with Fractions (2 Weeks) Unit 9: – Solving Problems with Number (2 Weeks) Unit 12: Exploring Change (2 Weeks)	Unit 10: Investigating Statistics (2 Weeks) Unit 11: Visualising Shape (2 Weeks) Unit 12: Exploring Change (2 Weeks)	Unit 13: Reasoning Proportionally (2 Weeks) Unit 14: Describing Position (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)
(Functional) Stage 8,9,10 KS 2 - 3	Unit 1: Number Systems (2 Weeks) Unit 2: Pattern Sniffing (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)	Unit 2: Pattern Sniffing (2 Weeks) Unit 3: Investigating Numbers (3 Weeks) End of Term 1 Consolidation and Assessment	Unit 4: Exploring Shape (2 Weeks) Unit 6: Reasoning with Measure (2 Weeks) Unit 5: Generalising Arithmetic (2 Weeks)	Unit 7/8: Discovering Equivalency/ Reasoning with Fractions (2 Weeks) Unit 9: – Solving Problems with Number (2 Weeks) Unit 12: Exploring Change (2 Weeks)	Unit 10: Investigating Statistics (2 Weeks) Unit 11: Visualising Shape (2 Weeks) Unit 12: Exploring Change (2 Weeks)	Unit 13: Reasoning Proportionally (2 Weeks) Unit 14: Describing Position (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)

<p>(Functional) KS 4 Year 1</p>	<p>Unit 1: Number Systems (4 Weeks) Unit 2: Pattern Sniffing (2 Weeks)</p>	<p>Unit 2: Pattern Sniffing (2 Weeks) Unit 3: Investigating Numbers (3 Weeks) End of Term 1 Consolidation and Assessment</p>	<p>Unit 4: Exploring Shape (2 Weeks) Unit 6: Reasoning with Measure (2 Weeks) Unit 5: Generalising Arithmetic (2 Weeks)</p>	<p>Unit 9: – Solving Problems with Number (2 Weeks) Unit 7/8: Discovering Equivalency/ Reasoning with Fractions (2 Weeks) Unit 12: Exploring Change (2 Weeks)</p>	<p>Unit 10: Investigating Statistics (2 Weeks) Unit 11: Visualising Shape (2 Weeks) Unit 12: Exploring Change (2 Weeks)</p>	<p>Unit 13: Reasoning Proportionally (2 Week) Unit 14: Describing Position (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)</p>
<p>(Functional) KS 4 Year 2</p>	<p>Unit 1: Number Systems (4 Weeks) Unit2: Pattern Sniffing (2 Weeks)</p>	<p>Unit 2: Pattern Sniffing (2 Weeks) Unit 3: Investigating Numbers (3 Weeks) End of Term 1 Consolidation and Assessment</p>	<p>Unit 4: Exploring Shape (2 Weeks) Unit 6: Reasoning with Measure (2 Weeks) Unit 5: Generalising Arithmetic (2 Weeks)</p>	<p>Unit 9: – Solving Problems with Number (2 Weeks) Unit 7/8: Discovering Equivalency/ Reasoning with Fractions (2 Weeks) Unit 10: Investigating Statistics (2 Weeks)</p>	<p>Unit 10: Investigating Statistics (1 Week) Unit 11: Visualising Shape (2 Weeks) Unit 12: Exploring Change (1 Week) Year 11 Entry Level Assessments</p>	<p>Unit 13: Reasoning Proportionally (2 Weeks) Unit 14: Describing Position (2 Weeks) Unit 15: Measuring and Estimating (2 Weeks)</p>