

Mathematics Overview

At Hartside Primary Academy, we want every child to develop a deep understanding of mathematics, a positive 'can do' attitude, and a love of the subject. We teach through a Teaching for Mastery approach, guided by the NCETM Five Big Ideas. Lessons are carefully sequenced in small steps so that knowledge is secure and built upon over time. Key concepts are revisited, and pupils become fluent in number facts, reasoning, and problem-solving. Mathematical vocabulary is taught explicitly, modelled by adults, and used by children to explain their thinking. Children in Reception and KS1 follow the NCETM Mastering Number sessions to secure their number sense.

At Hartside, we use Power Maths as our core resource, supported by additional materials to deepen understanding. Children regularly use Numbots and TT Rockstars to develop fluency. Every other year, we take part in NSPCC Number Day, raising the profile of maths while supporting a worthy cause. During Maths Week England, visitors share how maths shapes their careers, and we organise whole-school events such as Maths Escape Rooms in partnership with Subject Revolution. We also host Parent Maths Workshops with Durham Learn to help families support learning at home.

We make maths visible and engaging throughout the school environment. Recently, we installed outdoor number squares and number lines for children to use in games and activities. Our goal is to create a culture where maths is practical, fun, and celebrated both inside and outside the classroom.

Nursery	Objectives covered: -Exploring colours -Matching colours - Naming colours -Finding a matching pair - Exploring same and different - Sort objects by colour, shape and size -Identifying sorting rules - Explaining what they notice - Identifying the numeral 1 and 2 - Subitising 1 and 2 - Counting 1 and 2 - Developing 1-1 correspondence - Developing counting skill and technique - Exploring and extending AB colour patterns - Copying and creating AB movement patterns - Fixing patterns	Objectives covered: Identifying the numeral 3, 4, 5, 6 - Subitising 3, 4, 5, 6 - Counting 123456 -Developing 1-1 correspondence - Developing counting skill and technique - Introduction to length and height - Introduction to measurement related vocabulary - Introduction to weight - Learn about 2D shapes - Introduction to mass related vocabulary - Introduction to capacity - Introduction to capacity related vocabulary	Objectives covered: - Learning the days of the week - Learning the routine -Sequencing the day and activities - Learning and understanding positional language. -Adding one more -Taking one away -Ordering numerals to 5 -Estimating -Exploring and naming 2D shapes - Using shapes to build pictures -Exploring and naming 3D shapes -Comparing more and less

			- Counting amounts - Building and splitting numbers in different ways - Developing an in-depth understanding of which number comes next 1-5 and before 0-5. - Getting ready for Reception
Reception	Unit 1 : Numbers to 5 Unit 2: Comparing groups within 5 Unit 3: Shapes (3D and 2D) Unit 4: Change within 5 Unit 5: Number bonds to 5 Unit 6: Space Unit 7: Numbers to 10 Unit 8: Comparing numbers within 10	Unit 8: Addition to 10 Unit 9: Addition to 10 Unit 10: Measure (length, height, weight) Unit 11: Number bonds to 10 Unit 12: Subtraction Unit 13: Exploring Patterns Unit 14: Counting on and counting back	Unit 15: Numbers to 20 Unit 16: Numerical patterns Unit 17: Shape (composing and decomposing shapes) Unit 18: Measure (Volume and capacity) Unit 19: Sorting (optional) Unit 20: Time (optional)
Year 1	Unit 1: Numbers to 10 Unit 2: Part-whole within 10 Unit 3: Addition within 10 Unit 4: Subtraction within 10 Unit 5: 2D and 3D shapes	Unit 6: Numbers to 20 Unit 7: Addition and Subtraction Unit 8: Numbers to 50 Unit 9: Introducing length and height Unit 10: Introducing weight & volume	Unit 11: Multiplication and division Unit 12: Halves and quarters Unit 13: Position and direction Unit 14: Numbers to 100 Unit 15: Money Unit 16: Time
Year 2	Unit 1: Numbers to 100 Unit 2: Addition and Subtraction Unit 3: Addition and Subtraction Unit 4: Properties of shapes Unit 5: Money	Unit 6: Multiplication and Division Unit 7: Multiplication and Division Unit 8: Length and height (Unit 9: Mass, capacity and temperature Unit 10: Fractions	Unit 11: Times Unit 12: Problem Solving Unit 13: Position and direction Unit 14: Statistics
Year 3	Unit 1: Place Value within 1000 Unit 2: Addition and Subtraction Unit 3: Addition and Subtraction Unit 4: Multiplication and Division Unit 5: Multiplication and Division	Unit 6: Multiplication and Division Unit 7: Length and Perimeter Unit 8: Fractions Unit 9: Mass Unit 10: Capacity	Unit 11: Fractions Unit 12: Money Unit 13: Time Unit 14: Angles and properties of shapes Unit 15: Statistics
Year 4	Unit 1: Place Value – 4 digit numbers Unit 2: Place Value – 4 digit numbers	Unit 6: Multiplication and Division Unit 7: Perimeter	Unit 11: Decimals 2 Unit 12: Money

	Unit 3: Addition and Subtraction Unit 4: Area Unit 5: Multiplication and Division	Unit 8: Fractions 1 Unit 9: Fractions 2 Unit 10: Decimals 1	Unit 13: Time Unit 14: Geometry – angles and 2D shapes Unit 15: Statistics Unit 16: Position and Direction
Year 5	Unit 1: Place Value 1 – within 1,000,000 Unit 2: Place Value 2 – within 1,000,000 Unit 3: Addition and Subtraction Unit 4: Multiplication and Division Unit 5: Fractions 1	Unit 6: Fractions 2 Unit 7: Multiplication and Division 2 Unit 8: Fractions 3 Unit 9: Decimals and Percentages Unit 10: Measure – perimeter and area Unit 11: Graphs and Tables	Unit 12: Geometry – properties of shapes Unit 13: Geometry – position and direction Unit 14: Decimals Unit 15: Negative numbers Unit 16: Measure – converting units Unit 17: Measure – volume and capacity
Year 6	Unit 1: Place Value 1 – within 10,000,000 Unit 2: Four operations Unit 3: Four operations Unit 4: Fractions 1 Unit 5: Fractions 2	Unit 6: Imperial and metric Unit 7: Ratio and Proportion Unit 8: Algebra Unit 9: Decimals Unit 10: Percentages Unit 11: Measure – perimeter, area, volume	Unit 12: Statistics Unit 13: Geometry – properties of shape Unit 14: Position and direction Unit 15: Problem Solving Consolidation, SATs prep