



Progression of Skills in Maths at MPS



Intent

Mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. At MPS our Maths Curriculum aims to not only deliver and meet the National Curriculum objectives of fluency, reasoning and problem solving by building on mathematical skills Early Years Foundation through to year 6 but to also foster:

- A deep understanding of mathematics concepts.
- An understanding, enjoyment and enthusiasm for learning through practical activity, exploration and discussion.
- A positive 'can do' attitude towards mathematics and an awareness of the fascination of mathematics; a belief that all children can achieve in mathematics.
- Competence and confidence in mathematical knowledge, concepts and skills which are built upon year on year.
- A fluency in the fundamentals of mathematics, so pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly.
- An ability to solve problems, to reason, to think logically and to work systematically and accurately with resilience.
- Initiative and an ability to work both independently and in cooperation with others.
- An ability to communicate mathematics confidently using a wide mathematical vocabulary.
- An ability to use and apply mathematics across the curriculum and in real life.

Implementation

To provide adequate time for developing numeracy skills, each class teacher will provide daily mathematics lessons using the Mastery approach. Additional mathematics may be taught within other subject lessons when appropriate. Teachers of the Early Years Foundation Stage children, base their teaching on objectives in the Early Years Foundation Stage framework; this ensures that they are working towards the 'Early Learning Goals for Mathematical Development'. Staff at Mickleover Primary School, strive to maintain a good subject knowledge, and an understanding of the structure of mathematical concepts. They deliver well planned and coherent lessons following a mastery approach so that students develop a deep understanding and become 'masters' of maths. Staff will use questioning to develop reasoning and will use misconceptions to drive learning forwards. Working walls within the classroom will be used as a tool to support and scaffold learning and the development of mathematical language. Maths lessons will be inclusive with all children being taught the same objective with a focus on depth rather than coverage. However, SEND children will be supported at an individual level and greater depth children will be challenged by skilled questioning and IMPRESS me tasks.

Assessment opportunities will be used throughout the lesson, through use of careful examples and challenge questions. Children will evaluate their own performance using a traffic light system. Staff will identify students who need immediate intervention to ensure that pupils can progress with their learning and intervention will be provided through TA support or additional teacher support in focused intervention groups. More formal assessment will be completed using weekly arithmetic tests at KS2; testing of fluency skills using the maths target track weekly at both Key stages; end of block assessments and formal termly assessments using NFER, SATS papers, or White Rose Assessment materials at both Key Stages. The White Rose Scheme of work and additional White Rose Resources, Power Maths, Nrich, NCETM mastery resources, MyMaths and TT Rockstars are used for teaching and learning. Staff are also supported by the Maths Leads who will deliver CPD.

Motivated to learn, Proud of our achievements, Successful and skilled for life.



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Pupils at Mickleover Primary School will be encouraged to display a positive approach to learning maths and will be encouraged to engage and be motivated within the lesson. They will be able to select manipulatives to support and explain their learning and communicate their ideas confidently both orally and by using a variety of written representations. They will have a good fluency and strategies to help them solve problems.

In a typical maths lesson at Mickleover Primary School you can expect to see:

- Games, oral work and mental calculation to rehearse and develop fluency.
- Teacher modelling and guided practise using anchor tasks, with a balance between whole class, grouped, paired and individual work.
- Careful questioning to develop reasoning and opportunities to 'Prove it' and 'Impress' the teacher.
- A summary or mini plenary within the lesson or at the end of the lesson. This will involve work with the whole class to clarify misconceptions, identify progress, to summarise key facts and ideas, to make links to other work and to discuss next steps.
- Opportunities for children to talk and discuss their thinking and reasoning using correct mathematical vocabulary within pairs or small groups.
- Use of a concrete, pictorial and abstract approach.
- Confidence, enthusiasm and a positive 'can do' attitude from both teachers and pupils.

Impact

Through the delivery of our maths curriculum at Mickleover Primary school, all children will have equal opportunity for learning. Through a carefully planned progression of skills from one year to the next, children in each year group will demonstrate a quick recall of facts and calculation methods relevant to yearly objectives. Children will be confident with the recall of all number facts (including times table facts)

Children will show confidence and a positive growth mind set and approach the learning of maths with a positive 'can do' attitude, understanding that it is acceptable to make mistakes because these misconceptions are used to drive learning forwards.

Children will demonstrate a flexibility and fluidity to move between different contexts and representations of maths and the opportunity to make connections and recognise relationships within mathematical concepts.

Teachers believe that every child can achieve in maths and will expect high standards; most children will make at least expected progress in each year group. Mathematical concepts or skills are mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations. Children in each year group will be able to talk about maths articulately using appropriate mathematical language. Children will be skilled and ready for the next stage of their learning and will be confidently able to recognise and identify the maths skills required in life beyond school. At the end of KS2 children will have reached the standard required to enable them to access the KS3 curriculum.



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value Counting	<p>Count objects, actions and sounds.</p> <p>Verbally count beyond 20, recognising the pattern of the counting system.</p> <p>Subitise (recognise quantities without counting) up to 5.</p>	<ul style="list-style-type: none"> Count to and across 100 forwards and backwards, beginning with 0 or 1 or from any given number Count numbers to 100 in numerals; count in multiples of twos, fives and tens 	<ul style="list-style-type: none"> Count in steps of 2, 3, and 5 from 0 and in tens from any number, forward and backward 	<ul style="list-style-type: none"> count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number 	<ul style="list-style-type: none"> count in multiples of 6, 7, 9, 25 and 1 000 count backwards through zero to include negative numbers 	<ul style="list-style-type: none"> count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero 	
	<ul style="list-style-type: none"> Link the number symbol (numeral) with its cardinal number value Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally 	<ul style="list-style-type: none"> identify and represent numbers using objects and pictorial representations including the number line read and write numbers to 100 in numerals read and write numbers from 1 to 20 in numerals and words. 	<ul style="list-style-type: none"> read and write numbers to at least 100 in numerals and in words identify, represent and estimate numbers using different representations, including the number line 	<ul style="list-style-type: none"> identify, represent and estimate numbers using different representations read and write numbers up to 1000 in numerals and in words 	<ul style="list-style-type: none"> identify, represent and estimate numbers using different representations read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value 	<ul style="list-style-type: none"> read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit read Roman numerals to 1 000 (M) and recognise years written in Roman numerals. 	<ul style="list-style-type: none"> read, write, order and compare numbers up to 10 000 000 and determine the value of each digit



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
PLACE VALUE Using PV and Compare	<ul style="list-style-type: none"> Compare numbers Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other Quantity`. Understand the 'one more than/one less than' relationship between consecutive numbers. 	given a number, identify one more and one less	recognise the place value of each digit in a two-digit number (tens, ones) compare and order numbers from 0 up to 100; use <, > and = signs	recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	find 1 000 more or less than a given number recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
	<ul style="list-style-type: none"> Have a deep understanding of number to 10, including the composition of each number. 		use place value and number facts to solve problems	solve number problems and practical problems involving these ideas.	<ul style="list-style-type: none"> round any number to the nearest 10, 100 or 1 000 solve number and practical problems that involve all of the above and with increasingly large positive numbers 	<ul style="list-style-type: none"> round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above 	<ul style="list-style-type: none"> round any whole number to a required degree of accuracy use negative numbers in context and calculate intervals across zero solve number and practical problems that involve all of the above



Progression of Skills in Maths at MPS



STRAND	• EYFS	• KS1		KS2			
		• Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ADDITION & SUBTRACTION: Recall, Represent, Use	Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	<ul style="list-style-type: none"> read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs represent and use number bonds and related subtraction facts within 20 	<ul style="list-style-type: none"> recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. 	<ul style="list-style-type: none"> estimate the answer to a calculation and use inverse operations to check answers 	<ul style="list-style-type: none"> estimate and use inverse operations to check answers to a calculation 	<ul style="list-style-type: none"> use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy 	



Progression of Skills in Maths at MPS



ADDITION & SUBTRACTION: Calculations	<ul style="list-style-type: none"> Explore the composition of numbers to 10 	<ul style="list-style-type: none"> add and subtract one-digit and two-digit numbers to 20, including zero 	add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> a two-digit number and ones a two-digit number and tens two two-digit numbers adding three one-digit numbers 	add and subtract numbers mentally, including: <ul style="list-style-type: none"> a three-digit number and ones a three-digit number and tens a three-digit number and hundreds 	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	<ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers 	<ul style="list-style-type: none"> perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the four operations
ADDITION & SUBTRACTION Solve Problems	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <ul style="list-style-type: none"> $7 = \square - 9$ 	solve problems with addition and subtraction: <ul style="list-style-type: none"> using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods 	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	<ul style="list-style-type: none"> solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why 	<ul style="list-style-type: none"> solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems involving addition, subtraction, multiplication and division and a combination of these including understanding the meaning of equals sign 	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
MULTIPLICATION & DIVISION: Recall, Represent, Use	<ul style="list-style-type: none"> Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally 		<ul style="list-style-type: none"> recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot 	<ul style="list-style-type: none"> recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables 	<ul style="list-style-type: none"> recall multiplication and division facts for multiplication tables up to 12×12 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers recognise and use factor pairs and commutativity in mental calculations 	<ul style="list-style-type: none"> identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) 	<ul style="list-style-type: none"> identify common factors, common multiples and prime numbers use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy



Progression of Skills in Maths at MPS



MULTIPLICATION & DIVISION: Calculations			<ul style="list-style-type: none">calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs	<ul style="list-style-type: none">write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	<ul style="list-style-type: none">multiply two-digit and three-digit numbers by a one-digit number using formal written layout	<ul style="list-style-type: none">multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbersmultiply and divide numbers mentally drawing upon known factsdivide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the contextmultiply and divide whole numbers and those involving decimals by 10, 100, and 1000	<ul style="list-style-type: none">divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the contextdivide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the contextdivide numbers up to 4 digits by a 2 digit number using the formal written method for division where appropriate, interpreting remainders according to the contextperform mental calculations, including with mixed operations and large numbers



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
MULTIPLICATION & DIVISION: Solve problems		<ul style="list-style-type: none"> • solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher 	<ul style="list-style-type: none"> • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts 	<ul style="list-style-type: none"> • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects 	<ul style="list-style-type: none"> • solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to objects 	<ul style="list-style-type: none"> • solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates 	<ul style="list-style-type: none"> • solve problems involving addition, subtraction, multiplication and division
MULTIPLICATION & DIVISION: Combined operations						<ul style="list-style-type: none"> • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign 	<ul style="list-style-type: none"> • use their knowledge of the order of operations to carry out calculations involving the four operations



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
FRACTIONS: Recognise and write		<ul style="list-style-type: none"> recognise, find and name a half as one of two equal parts of an object, shape or quantity recognise, find and name a quarter as one of four equal parts of an object, shape or quantity 	<ul style="list-style-type: none"> recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity 	<ul style="list-style-type: none"> recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators 	<ul style="list-style-type: none"> count up and down in hundredths recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten 	<ul style="list-style-type: none"> identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$) 	
	FRACTIONS: Compare			<ul style="list-style-type: none"> recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$. 	<ul style="list-style-type: none"> recognise and show, using diagrams, equivalent fractions with small denominators compare and order unit fractions, and fractions with the same denominators 	<ul style="list-style-type: none"> recognise and show, using diagrams, families of common equivalent fractions 	<ul style="list-style-type: none"> compare and order fractions whose denominators are all multiples of the same number



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
FRACTIONS: Calculations			<ul style="list-style-type: none"> write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 	<ul style="list-style-type: none"> add and subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$) 	<ul style="list-style-type: none"> add and subtract fractions with the same denominator 	<ul style="list-style-type: none"> add and subtract fractions with the same denominator and multiples of the same number multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams 	<ul style="list-style-type: none"> add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)
FRACTIONS: Solve problems				<ul style="list-style-type: none"> solve problems that involve all of the above 	<ul style="list-style-type: none"> solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number 		



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
DECIMALS: Recognise and write					<ul style="list-style-type: none"> recognise and write decimal equivalents of any number of tenths or hundredths recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$ 	<ul style="list-style-type: none"> read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$) recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents 	<ul style="list-style-type: none"> identify the value of each digit in numbers given to three decimal places
DECIMALS: Compare					<ul style="list-style-type: none"> round decimals with one decimal place to the nearest whole number compare numbers with the same number of decimal places up to two decimal places 	<ul style="list-style-type: none"> round decimals with two decimal places to the nearest whole number and to one decimal place read, write, order and compare numbers with up to three decimal places 	



Progression of Skills in Maths at MPS



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		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
DECIMALS: Calculations & Problems					<ul style="list-style-type: none">find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths	<ul style="list-style-type: none">solve problems involving numbers up to three decimal places	<ul style="list-style-type: none">multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal placesmultiply one-digit numbers with up to two decimal places by whole numbersuse written division methods in cases where the answer has up to two decimal placessolve problems which require answers to be rounded to specified degrees of accuracy



Progression of Skills in Maths at MPS



Fractions, Decimals and Percentages					<ul style="list-style-type: none">• solve simple measure and money problems involving fractions and decimals to two decimal places.	<ul style="list-style-type: none">• recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator 100 as a decimal fraction solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25.	<ul style="list-style-type: none">• associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)• recall and use equivalences between simple fractions, decimals and percentages, including in different contexts



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
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Ratio and Proportion							<ul style="list-style-type: none">• solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts• solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison• solve problems involving similar shapes where the scale factor is known or can be found• solve problems involving unequal sharing and grouping using knowledge of fractions and multiples



Progression of Skills in Maths at MPS



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		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Algebra	<ul style="list-style-type: none"> Continue, copy and create repeating patterns. 	<ul style="list-style-type: none"> solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ 	<ul style="list-style-type: none"> recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. 	<ul style="list-style-type: none"> solve problems, including missing number problems, 			<ul style="list-style-type: none"> use simple formulae generate and describe linear number sequences express missing number problems algebraically find pairs of numbers that satisfy number sentences involving two unknowns enumerate all possibilities of combinations of two variables
	<p style="color: red;">NB although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the missing number objectives in Y1/2/3</p>						<p style="color: red;">Spring 3</p>



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Using measures	<ul style="list-style-type: none"> Compare length, weight and capacity. 	<ul style="list-style-type: none"> compare, describe and solve practical problems for: lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] mass/weight [e.g. heavy/light, heavier than, lighter than] capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] time [e.g. quicker, slower, earlier, later] measure and begin to record the following: lengths and heights mass/weight capacity and volume time (hours, minutes, seconds) 	<ul style="list-style-type: none"> choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels compare and order lengths, mass, volume/capacity and record the results using >, < and = 	<ul style="list-style-type: none"> measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) 	<ul style="list-style-type: none"> convert between different units of measure (e.g. kilometre to metre; hour to minute estimate, compare and calculate different measures, 	<ul style="list-style-type: none"> convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) understand and use equivalences between metric units and common imperial units such as inches, pounds and pints use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling. 	<ul style="list-style-type: none"> solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places convert between miles and kilometres



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Money		<ul style="list-style-type: none">recognise and know the value of different denominations of coins and notes	<ul style="list-style-type: none">recognise and use symbols for pounds (£) and pence (p): combine amounts to make a particular valuefind different combinations of coins that equal the same amounts of moneysolve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	add and subtract amounts of money to give change, using both £ and p in practical contexts	estimate, compare and calculate different measures, including money in pounds and pence	Use all four operations to solve problems involving measure (eg Money)	



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measures: Time		<ul style="list-style-type: none"> sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] recognise and use language relating to dates, including days of the week, weeks, months and years tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. 	<ul style="list-style-type: none"> compare and sequence intervals of time tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. know the number of minutes in an hour and the number of hours in a day. 	<ul style="list-style-type: none"> tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight know the number of seconds in a minute and the number of days in each month, year and leap year compare durations of events, for example to calculate the time taken by particular events or tasks summer 2 	<ul style="list-style-type: none"> read, write and convert time between analogue and digital 12 and 24-hour clocks solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days 	<ul style="list-style-type: none"> solve problems involving converting between units of time 	Use, read , write and convert between standard units, converting measurements of time from a smaller unit to a larger unit and vice verca



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Perimeter, Area and volume				<ul style="list-style-type: none"> measure the perimeter of simple 2-D shapes 	<ul style="list-style-type: none"> measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares 	<ul style="list-style-type: none"> measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes estimate volume (e.g. using 1 cm^3 blocks to build cubes and cuboids) and capacity (e.g. using water) 	<ul style="list-style-type: none"> recognise that shapes with the same areas can have different perimeters and vice versa <ul style="list-style-type: none"> recognise when it is possible to use formulae for area and volume of shapes calculate the area of parallelograms and triangles calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3.



Progression of Skills in Maths at MPS



STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
GEOMETRY: 2d Shapes	<ul style="list-style-type: none"> Select, rotate and manipulate shapes in order to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. 	recognise and name common 2-D shapes, including: e.g. rectangles (including squares), circles and triangles	<ul style="list-style-type: none"> identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] compare and sort common 2-D and 3-D shapes and everyday objects 	<ul style="list-style-type: none"> draw 2-D shapes 	<ul style="list-style-type: none"> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes identify lines of symmetry in 2-D shapes presented in different orientations 	<ul style="list-style-type: none"> distinguish between regular and irregular polygons based on reasoning about equal sides and angles use the properties of rectangles to deduce related facts and find missing lengths and angles 	<ul style="list-style-type: none"> draw 2-D shapes using given dimensions and angles compare and classify geometric shapes based on their properties and sizes illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
		<ul style="list-style-type: none"> 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres]. 	<ul style="list-style-type: none"> Recognise and name common 3D shapes (ie cuboids (including cubes), pyramids and spheres) Compare and sort common 3d shapes and everyday objects 	<ul style="list-style-type: none"> and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them 		<ul style="list-style-type: none"> identify 3-D shapes, including cubes and other cuboids, from 2-D representations 	<ul style="list-style-type: none"> recognise, describe and build simple 3-D shapes, including making nets



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		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
GEOMETRY: Angles and lines				<ul style="list-style-type: none"> recognise angles as a property of shape or a description of a turn identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle identify horizontal and vertical lines and pairs of perpendicular and parallel lines 	<ul style="list-style-type: none"> identify acute and obtuse angles and compare and order angles up to two right angles by size identify lines of symmetry in 2D shapes presented in different orientations complete a simple symmetric figure with respect to a specific line of symmetry 	<ul style="list-style-type: none"> know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles draw given angles, and measure them in degrees (°) identify: angles at a point and one whole turn (total 360°) angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90° 	<ul style="list-style-type: none"> find unknown angles in any triangles, quadrilaterals, and regular polygons recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles



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STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
GEOMETRY: Position and direction		<ul style="list-style-type: none"> describe position, direction and movement, including half, quarter and three-quarter turns. 	<ul style="list-style-type: none"> order and arrange combinations of mathematical objects in patterns and sequences use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) 		<ul style="list-style-type: none"> describe positions on a 2-D grid as coordinates in the first quadrant describe movements between positions as translations of a given unit to the left/right and up/down plot specified points and draw sides to complete a given polygon 	<ul style="list-style-type: none"> identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed 	<ul style="list-style-type: none"> describe positions on the full coordinate grid (all four quadrants) draw and translate simple shapes on the coordinate plane, and reflect them in the axes.



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STRAND	EYFS	KS1		KS2			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
STATISTICS Present and interpret			<ul style="list-style-type: none"> interpret and construct simple pictograms, tally charts, block diagrams and simple tables 	<ul style="list-style-type: none"> interpret and present data using bar charts, pictograms and tables 	<ul style="list-style-type: none"> interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs 	<ul style="list-style-type: none"> complete, read and interpret information in tables, including timetables 	<ul style="list-style-type: none"> interpret and construct pie charts and line graphs and use these to solve problems
STATISTICS: Solve Problems			<ul style="list-style-type: none"> ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ask and answer questions about totalling and comparing categorical data 	<ul style="list-style-type: none"> solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and tables. 	<ul style="list-style-type: none"> solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. 	<ul style="list-style-type: none"> solve comparison, sum and difference problems using information presented in a line graph 	<ul style="list-style-type: none"> calculate and interpret the mean as an average