

St Paul's C of E Primary School



Maths Overview and Progression Document

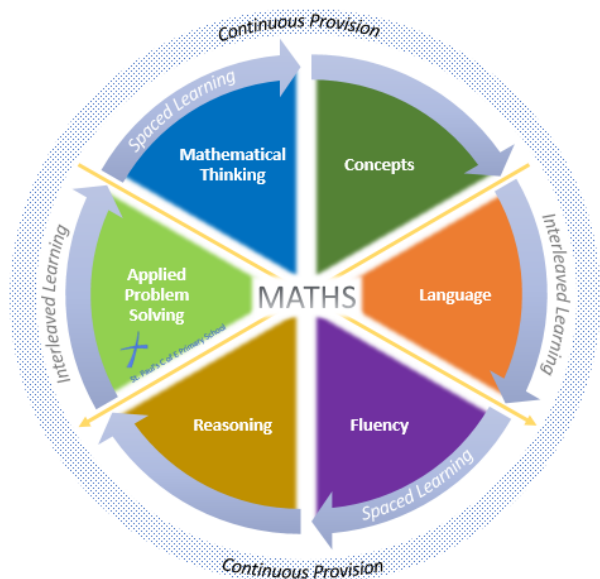
A high-quality mathematics education provides St. Paul's pupils with the foundations for understanding much about the exciting world they live in, through the varied topics within the subject curriculum. Maths has helped to shape lives in the modern world and has generationally improved people's prosperity. Therefore, all pupils at St. Paul's are taught essential aspects of maths, contextualised and applied directly in the subject itself, and within the wider curriculum. Maths learning at St. Paul's serves to drive curiosity in the theories and models, develop the pupils as mathematical explorers and create independently

engaged learners. Gaining an understanding of the subject this way, fosters an appreciation of the 'power' of maths, provide financial literacy and helps to broaden their opportunities and make them life-long learners who love Maths! Therefore, Maths must and does take a central position within St. Paul's, ensuring we are mathematicians together who inspire each other.

The national curriculum for mathematics sets a number of key learning goals:

- *become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately*
- *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*

At St. Paul's, we recognise that the study of maths is a highly interconnected practice, which requires a multi-disciplinary approach to both teaching and learning – as such we have adopted models that support this. Furthermore, as a family of learners, we continually evaluate the way we deliver maths to meet the changing needs of our community and the latest research in learning.



Place Value

Phase 1		Phase 2			Phase 3	
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To count groups of objects within 10	To count to and across 10, forwards and backwards, beginning with 0 or 1 <i>MyMastery (U1)</i> <i>MyMastery (U2)</i> <i>(Numbers to 100)</i>	To count to and across 100, forwards and backwards, beginning from any given number <i>MyMastery (U1)</i>	To count to and across 1000, forwards and backwards, beginning from any given number <i>MyMastery (U1)</i>	To count backwards through zero to include negative numbers <i>MyMastery (U1)</i>	To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero <i>MyMastery (U1)</i>	To use negative numbers in context, and calculate intervals across zero <i>MyMastery (U1)</i>
To recognise numbers within 10	To count, read and write numbers to 10 in numerals; count in multiples of twos, fives and tens <i>MyMastery (U1)</i>	To count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward <i>MyMastery (Yr2 U1)</i>	To count from 0 in multiples of 4, 8, 50 and 100 <i>MyMastery (Yr 4 U1)</i>	To count in multiples of 6, 7, 9, 25 and 1000 <i>MyMastery (Yr 4 U1)</i>	To count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 <i>MyMastery (Yr 5 U1)</i>	
To use the words 'more' and 'less'	When given a number, identify one more and one less		To find 10 or 100 more or less than a given number	To find 1000 more or less than a given number		
To identify one more and one less than a group of objects	To use the language of: equal to, more than, less than (fewer), most, least <i>MyMastery (U1)</i>	To compare and order numbers from 0 up to 100; use <, > and = signs <i>MyMastery (U1)</i>	To compare and order numbers up to 1000 <i>MyMastery (U1)</i> <i>MyMastery (U2)</i>	To order and compare numbers beyond 1000 <i>MyMastery (U1)</i>	To read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit <i>MyMastery (U1)</i>	To read, write, order and compare numbers up to 10 000 000 and determine the value of each digit <i>MyMastery (U1)</i>
To write numbers up to 10 in digits	To read and write numbers from 1 to 20 in numerals and words.	To read and write numbers to at least 100 in numerals and in words	To read and write numbers up to 1,000 in numerals and in words To understand that a 0 digit is called a	To 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.	To read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit To read Roman numerals to 1000	To read, write, order and compare numbers up to 10 000 000 and determine the value of each digit

	<i>MyMastery (U4)</i>	<i>MyMastery (U1)</i>	place holder, and the importance of this <i>MyMastery (U1)</i> <i>MyMastery (U2)</i>	<i>MyMastery (U13)</i>	(M) and recognise years written in Roman numerals. <i>MyMastery (U1)</i>	<i>MyMastery (U1)</i>
To accurately count irregular groups of objects up to 10	To recognise the place value of numbers within 20 <i>MyMastery (U4)</i>	To recognise the place value of each digit in a two-digit number (tens, ones) <i>MyMastery (U1)</i>	To recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	To recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	To read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit <i>MyMastery (U1)</i>	To read, write, order and compare numbers up to 10 000 000 and determine the value of each digit <i>MyMastery (U1)</i>
To identify missing numbers within 10 (when counting in 1s)	To estimate where numbers go on a number line based on knowledge of place value (within 20) <i>MyMastery (U4)</i>	To estimate where numbers go on a number line based on knowledge of place value (2 digits) <i>MyMastery (U1)</i>	To estimate where numbers go on a number line based on knowledge of place value (3 digits) <i>MyMastery (U2)</i>	To round any number to the nearest 10, 100 or 1 000 <i>MyMastery (U1)</i>	To round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000 <i>MyMastery (U1)</i>	To round any whole number to a required degree of accuracy <i>MyMastery (U1)</i>

Addition and Subtraction

	Phase 1		Phase 2		Phase 3	
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>To understand that to add something makes it bigger</p> <p>To understand that to take away means getting smaller</p>	<p>To add and subtract one-digit numbers to 10, including 0</p> <p>To add and subtract two-digit numbers to 20, including zero</p> <p><i>MyMastery (U2)</i> <i>MyMastery (U5)</i> <i>MyMastery (U7)</i></p>	<p>To add and subtract numbers using concrete objects, pictorial representations, and mentally</p> <ul style="list-style-type: none"> * a two-digit number & ones * a two-digit number & tens * two two-digit numbers * three one-digit numbers <p><i>MyMastery (U2)</i> <i>MyMastery (U15)</i></p>	<p>To add and subtract numbers mentally</p> <ul style="list-style-type: none"> * a three-digit number & ones * a three-digit number & tens * a three-digit number & hundreds * two three-digit numbers <p><i>MyMastery (U4)</i></p>	<p>To add and subtract numbers mentally</p> <ul style="list-style-type: none"> * a four-digit number & tens * a four-digit number & hundreds * a four-digit number and thousands * two four-digit numbers <p><i>MyMastery (U2)</i></p>	<p>To add and subtract numbers mentally with increasingly large numbers</p> <p><i>MyMastery (U2)</i></p>	<p>To perform mental calculations, including with mixed operations and large numbers</p> <p><i>MyMastery (U3)</i></p>
<p>To use the vocabulary of more and less</p>	<p>To read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</p> <p><i>MyMastery (U2)</i></p>	<p>To add and subtract 2 digit numbers using pictorial representations and concrete objects in a columnar style</p> <p><i>MyMastery (U2)</i> <i>MyMastery (U9)</i> <i>MyMastery (U15)</i></p>	<p>To add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p> <p><i>MyMastery (U4)</i></p>	<p>To add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</p> <p><i>MyMastery (U2)</i></p>	<p>To add and subtract whole numbers with more than 4 digits, including using formal written methods</p> <p><i>MyMastery (U2)</i></p>	<p>To add and subtract whole numbers with more than 7 digits, including using formal written methods</p> <p><i>MyMastery (U3)</i> <i>MyMastery (U1)</i></p>

	<p>To understand that part add part equals whole and the whole is larger than the parts</p> <p><i>MyMastery (U2)</i></p>	<p>To show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p><i>MyMastery (Yr 2 U2)</i> <i>MyMastery (Yr 2 U9)</i> <i>MyMastery (Yr 3 U4)</i></p>	<p>To use knowledge of the order of operations to carry out calculations involving the four operations</p> <p><i>MyMastery (Yr4 U2)</i> <i>MyMastery (Yr5 U2)</i></p>	<p>To express missing number problems algebraically To find pairs of numbers that satisfy number sentences involving two unknowns</p> <p>To enumerate all possibilities of combinations of two variables <i>MyMastery (U3)</i></p>	
	<p>To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. <i>MyMastery (Yr1 U9)</i></p>	<p>To estimate the answer to a calculation and use inverse operations to check answers</p> <p><i>MyMastery (Yr 2 U3)</i> <i>MyMastery (Yr 2 U9)</i></p>	<p>To estimate and use inverse operations to check answers to a calculation</p> <p><i>MyMastery (Yr 3 U4)</i> <i>MyMastery (Yr4 U2)</i></p>	<p>To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</p> <p><i>MyMastery (U2)</i></p>	<p>To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</p> <p><i>MyMastery (U3)</i></p>

Statistics

Phase 1		Phase 2			Phase 3	
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>To identify a group that is the biggest</p> <p>To identify a group that is the smallest</p>	<p>To identify groups that have the most and groups that have the least</p>	<p>To interpret and construct simple pictograms, tally charts, block diagrams and simple tables</p> <p>To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</p> <p><i>MyMastery (U5)</i></p>	<p>To interpret and present data using bar charts, pictograms and tables</p> <p>To ask and answer questions by counting the number of objects in each category and sorting the categories by quantity</p> <p><i>MyMastery (U3)</i></p>	<p>To interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs</p> <p>To solve comparison, sum and difference problems using information presented in a range of methods</p> <p><i>MyMastery (U4)</i></p>	<p>To complete, read and interpret information in tables, including timetables</p> <p>To solve comparison, sum and difference problems using information presented in a line graph</p> <p><i>MyMastery (U3)</i></p>	<p>To interpret and construct pie charts and line graphs and use these to solve problems</p> <p>To calculate and interpret the mean as an average</p> <p><i>MyMastery (U9)</i></p>

Fractions

Phase 1		Phase 2			Phase 3	
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To understand and use the word 'share'	<p>To recognise, find and name a half as one of two equal parts of an object, shape or quantity</p> <p>To recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.</p> <p><i>MyMastery (U10)</i></p>	<p>To 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</p> <p>To compare and order unit fractions and fractions with the same denominators <i>MyMastery (U8)</i></p>	<p>To recognise, find and write fractions of a discrete set of objects.</p> <p>To use unit fractions and non-unit fractions with denominators <8</p> <p>To recognise that tenths arise from dividing an object into 10 equal parts and in dividing one digit numbers or quantities by 10.</p> <p><i>MyMastery (U9)</i></p>	<p>To recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten</p> <p><i>MyMastery (U8)</i></p> <p>To compare and order fractions whose denominators are all multiples of the same number <i>MyMastery (U6)</i></p>	<p>To recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</p> <p><i>MyMastery (U6)</i></p> <p>To compare and order fractions, including fractions >1 <i>MyMastery (U6)</i></p>	<p>To convert between fractions and decimals <i>MyMastery (U7)</i></p> <p><i>Ratio</i> To solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>To solve problems involving the calculation of percentages and the use of percentages for comparison <i>MyMastery (U8)</i></p> <p>To compare, order and reason about mixed and improper fractions <i>MyMastery (U7)</i> <i>MyMastery (U4)</i></p>

		<p>To show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p><i>MyMastery (U6)</i> <i>MyMastery (U16)</i></p>		<p>To recognise and use factor pairs and commutativity in mental calculations</p> <p><i>MyMastery (U3)</i></p>	<p>To multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</p> <p><i>MyMastery (U4)</i></p>	<p><i>To associate a fraction with division and calculate decimal equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)</i></p> <p><i>MyMastery (U4)</i></p>
		<p>To calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs</p> <p><i>MyMastery (U6)</i> <i>MyMastery (U16)</i></p>	<p>To write and calculate mathematical statements for multiplication and division using known multiplication tables</p> <p>To write multiplication equations for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods</p> <p><i>MyMastery (U6)</i> <i>MyMastery (U7)</i></p>	<p>To multiply two-digit and three-digit numbers by a one-digit number using formal written layout</p> <p><i>MyMastery (U3)</i></p>	<p>To multiply numbers up to 4 digits by a one- or two-digit number using a formal written method.</p> <p>To begin to use long multiplication for two-digit numbers</p> <p><i>MyMastery (U4)</i></p>	<p>To multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</p>

	<p>To understand that division means sharing equally</p> <p><i>MyMastery (U15)</i></p>	<p>To share a whole into equal parts</p> <p><i>MyMastery (U6)</i></p>	<p>To divide a 3 digit number using concrete and pictorial representations</p> <p><i>MyMastery (U7)</i></p> <p>To understand that there can be remainders when a whole is shared into parts</p> <p><i>MyMastery (U7)</i></p>	<p>To divide a 3 digit number using abstract, concrete and pictorial representations</p> <p><i>MyMastery (U3)</i></p> <p>To recognise and use factor pairs and commutativity in mental calculations</p> <p><i>MyMastery (U3)</i></p>	<p>To divide numbers up to 4 digits by a one-digit number using the formal written method of short division.</p> <p><i>MyMastery (U4)</i></p> <p>To interpret remainders appropriately</p> <p>To identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</p> <p>To know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</p>	<p>To divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate</p> <p>To divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division</p> <p>To interpret remainders as whole number remainders, fractions, or by rounding</p> <p><i>MyMastery (U7))</i></p> <p><i>Ratio</i></p> <p>To solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</p>
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					<p>establish whether a number up to 100 is prime and recall prime numbers up to 19</p> <p>To use square and cube numbers</p> <p><i>MyMastery (U4)</i></p>	<p><i>MyMastery (U10)</i></p>
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Shape and Position

Phase 1		Phase 2			Phase 3	
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To know that there is a difference between a 3D shape and a 2D shape	To recognise and name common 2-D and 3-D shapes	To identify and describe the properties of 2-D shapes	To draw 2-D shapes and make 3-D shapes using modelling materials	To identify lines of symmetry in 2-D shapes presented in different orientations	To draw given angles, and measure them in degrees	To draw 2-D shapes using given dimensions and angles
	2-D shapes [e.g. rectangles (including squares), circles and triangles]	To identify the number of sides and lines of symmetry in 2d shape	To recognise 3-D shapes in different orientations and describe them	To complete a simple symmetric figure using a specific line of symmetry		Name parts of a circle (radius, diameter and circumference)
	3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].	To identify and describe the properties of 3D shapes (vertices, edges and faces)			To identify 3-D shapes, including cubes and other cuboids, from 2-D representations	To recognise, describe and build simple 3-D shapes, including making nets
	<i>MyMastery (U3)</i>	<i>MyMastery (U11)</i>	<i>MyMastery (U10)</i>	<i>MyMastery (U11)</i>	<i>MyMastery (U9)</i> <i>MyMastery (U12)</i>	<i>MyMastery (U6)</i>
To name some 2D and 3D shapes (square, circle, cube, sphere)	To compare and sort common 2-D shapes	To group 2D and 3D shapes, thinking about their properties	To compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	To use the properties of rectangles to deduce related facts and find missing lengths and angles	To compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	
	To compare and sort common 3-D shapes				To distinguish between regular and irregular polygons based on reasoning about equal sides and angles <i>MyMastery (U12)</i>	

	<i>MyMastery (U3)</i>	<i>MyMastery (U11)</i>	<i>MyMastery (U10)</i>	<i>MyMastery (U11)</i>	<i>MyMastery (U9)</i>	
		To understand angles are the same as a turn (quarter or half) <i>MyMastery (U11)</i>	To recognise angles as a property of shape or a turn <i>MyMastery (U10)</i>	To know angles are measured in degrees	To estimate and compare acute, obtuse and reflex angles <i>MyMastery (U7)</i>	
			To identify right angles To recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn To identify whether angles are greater than or less than a right angle To identify horizontal and vertical lines and pairs of perpendicular and parallel lines <i>MyMastery (U10)</i>	To identify acute and obtuse angles To compare and order angles up to two right angles by size <i>MyMastery (U11)</i>	To 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° <i>MyMastery (U7)</i>	To recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles <i>MyMastery (U5)</i>
To move, following instructions (forward and backwards)	To describe position, direction and movement, including half and whole turns	To use mathematical vocabulary to describe position, direction and movement		To describe positions on a 2-D grid as coordinates in the first quadrant	To identify, describe and represent the position of a shape following a reflection or	To describe positions on the full coordinate grid (all four quadrants)

<p>To use the terms 'behind' and 'in front of' when lining up or using objects</p> <p><i>MyMastery (U3)</i></p>		<p>To distinguish between rotation as a turn and as right angles (clockwise and anti-clockwise)</p> <p><i>MyMastery (U11)</i></p>		<p>To describe movements between positions as translations of a given unit to the left/right and up/down</p> <p><i>MyMastery (U12)</i></p>	<p>translation, using the appropriate language, and know that the shape has not changed</p> <p><i>MyMastery (U9)</i></p>	<p>To draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</p> <p><i>MyMastery (U6)</i></p>
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Measurement

Phase 1		Phase 2			Phase 3	
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>To use the words 'long' and 'short'</p> <p>To compare two objects by length</p> <p>To use the words 'heavy' and 'light'</p> <p>To compare two objects by weight</p>	<p>To compare two lengths using (long, short, longer, shorter, tall, short, double, half)</p> <p>To compare two masses/weights using (heavy/light, heavier than, lighter than)</p>	<p>To compare and order lengths, using $<$, $>$ and $=$ using standard units</p> <p>To compare and order mass, using $<$, $>$ and $=$ using standard units</p> <p><i>MyMastery (U4)</i></p>	<p>To estimate, compare and calculate different measures using standard units</p> <p>(m, cm, mm) (kg, g) (l, ml)</p>	<p>To estimate, compare and calculate different measures</p> <p>To find the area of rectilinear shapes by counting squares</p>	<p>To calculate and compare the area of squares and rectangles including using standard units, (cm^2) (m^2) (including scaling)</p> <p><i>MyMastery (U5)</i></p> <p>To estimate and find the area of irregular shapes</p> <p>To calculate and compare the area of squares and rectangles (cm^2) (m^2)</p> <p><i>MyMastery (U5)</i></p> <p>To estimate volume and capacity</p>	<p>To calculate, estimate and compare volume of cubes and cuboids using standard units, (cm^3) (m^3)</p> <p>To convert units of measure, using decimal notation (to 3 decimal places)</p> <p><i>MyMastery (U7)</i></p> <p>To calculate the area of parallelograms and triangles</p> <p>To calculate, estimate and compare volume of cubes and cuboids (cm^3) (m^3) (mm^3) (km^3)</p> <p><i>MyMastery (U8)</i></p>
<p>To use the words 'full' and 'empty'</p> <p>To compare two objects by capacity</p>	<p>To compare capacity and volume (full/empty, more than, less than, half, half full)</p>	<p>To compare and order volume/capacity, using $<$, $>$ and $=$ using standard units</p>	<p><i>MyMastery (U11)</i> <i>MyMastery (U5)</i></p>	<p><i>MyMastery (U9)</i></p>	<p><i>MyMastery (U5)</i></p>	<p><i>MyMastery (U8)</i></p>
	<i>MyMastery (U11)</i>	<i>MyMastery (U13)</i>				

			To measure the perimeter of simple 2-D shapes <i>MyMastery (U5)</i>	To measure and calculate the perimeter of a rectilinear figure (including squares) in cm/m <i>MyMastery (U9)</i>	To measure and calculate the perimeter of composite rectilinear shapes in cm and m <i>MyMastery (U5)</i>	To recognise that shapes with the same areas can have different perimeters
To begin to use everyday language related to money	To recognise and know the value of different denominations of coins and notes <i>MyMastery (U14)</i>	To recognise and use symbols for pounds (£) and pence (p) To combine amounts to make a particular value To find different combinations of coins that equal the same amounts of money To use subtraction or counting on to solve problems involving giving change <i>MyMastery (U10)</i>	To add and subtract amounts of money to give change, using £ and p			
To know there is day time and night time in one day	To know the number of minutes in an hour and the number of hours in a day.	To know the number of seconds in a minute and the number of days in each month, year and leap year	To convert between different units of measure (kilometre to metre; hour to minute)	To convert between different units of metric measure (kilometre and metre; centimetre and metre;	To use, read, write and convert between standard units, converting measurements of length, mass,	

				centimetre and millimetre; gram and kilogram; litre and millilitre) To convert between miles and kilometres	volume and time from a smaller unit of measure to a larger unit, using decimal notation to up to three decimal places <i>MyMastery (U11)</i>	
	<i>MyMastery (U6)</i>	<i>MyMastery (U7)</i>	<i>MyMastery (U11)</i>			
To use the language 'before' and 'after' To order familiar events (wake up, breakfast, school, lunch, home)	To sequence events in chronological order using language (before, after, next, first, today, yesterday, tomorrow) <i>MyMastery (U6)</i>	To compare and sequence intervals of time (hours or minutes) <i>MyMastery (U7)</i>	To compare durations of events (calculate the time taken by particular events) <i>MyMastery (U8)</i>	To solve problems involving converting between units of time <i>MyMastery (U7)</i>		
	To tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. <i>MyMastery (U6)</i>	To 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. <i>MyMastery (U7)</i>	To tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks <i>MyMastery (U8)</i>	To read, write and convert time between analogue and digital 12 and 24-hour clocks <i>MyMastery (U7)</i>		
To know the days of the week To know months of the year	To recognise the words relating to dates, including days of the week, weeks, months and years	To know the number of minutes in an hour and the number of hours in a day	To estimate & read time with increasing accuracy to the nearest minute	To solve problems involving converting from hours to minutes; minutes to seconds; years to	To solve problems involving converting between units of time	

<p>To use the vocabulary morning, afternoon and night</p>	<p>To use the vocabulary noon and midnight</p> <p><i>MyMastery (U6)</i></p>	<p>To use vocabulary a.m./p.m.</p> <p><i>MyMastery (U7)</i></p>	<p>To record and compare time in terms of seconds, minutes, hours and o'clock</p> <p><i>MyMastery (U8)</i></p>	<p>months; weeks to days</p> <p><i>MyMastery (U7)</i></p>	<p><i>MyMastery (U14)</i></p>	
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Problem Solving

Phase 1		Phase 2		Phase 3		
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Show curiosity and asks questions about how to solve problems	To begin to develop a more systematic approach to solving a problem		To make suggestions to solve a range of problems		To identify necessary information to carry out a task and solve a problem	
To use trial and error	To ask simple questions relevant to a problem		To make connections to previous work and learning		To use mathematical experiences to explore ideas and raise questions to pursue further lines of enquiry	
To find a new way to solve a problem if a first attempt does not work	To use familiar strategies to solve problems within a known concept To choose equipment to help solve a problem (with support or from a pre chosen selection)		To develop personal strategies to solve problems within a known concept To choose equipment to help solve a problem independently		To use a range of personal strategies, concepts, skills and tools to solve a problem To choose appropriate equipment and justify choice	
Chooses one way to solve a problem	To begin to sort information, notice patterns in results whilst working		To identify irrelevant information, using a range of methods to sort information		To systematically organise, deconstruct and sequence information	
Begins to look at similarities and differences	To begin to give examples to match ideas and concepts when solving a problem To begin to find examples of 'odd one out'		To spot patterns surrounding the problem To begin to seek exceptions to a rule		To identify and use patterns, using mathematical models and diagrams to support problem solving To use counter arguments to prove a rule	
Uses speech to talk about mathematical ideas	To begin to describe a problem and with support, develop a way of recording		To represent a problem pictorially, restating the problem a different way, presenting work in a clear and organised way		To show understanding of problems by describing them using symbols, words, diagrams and deciding how to represent conclusions	

<p>Use experiences to test ideas and begin to anticipate what might happen</p>	<p>To begin to recognise similarities to previous learning, through supported discussion</p> <p>To begin to use familiar elements of knowledge to tackle problems that are unfamiliar (with support)</p> <p>To begin to think about 'what if' during problem solving</p> <p>To begin to make simple inferences based on own or group work</p>	<p>To make connections to previous work and learning, across a range of subjects</p> <p>To pose and answer questions to support solving a problem</p> <p>To think about 'what if' that may change the outcome of the problem</p> <p>To make inferences based on conclusions of own work</p>	<p>To create problems for pupils that are similar to those solved in class</p> <p>To develop a line of enquiry</p> <p>To think about how effective methods are and adapts based on the outcome of a problem</p> <p>To draw a valid conclusion and give an explanation of reasoning</p>
<p>To show an interest in solving problems</p>	<p>To begin to solve problems with one step, or a two simple steps with support</p>	<p>To solve problems with two or more steps, where one is more complex</p>	<p>To solve problems with an increasing number of steps, of increasingly complex steps</p>