



Doing all the good we can
Maths - Progression

Note: Each of the seven blocks is split across 2 or 3 terms as part of our spiral curriculum. The objectives for the block have been split across those 2 terms but this is only a suggestion – the curriculum will need adjusting to the needs of different groups who may need to revisit topics or to cover the objectives in a different order. Some objectives are repeated as they will be explored in greater depth when repeated. Objectives in italics are additions to the objectives or suggested ways of splitting an objective.

Year 1	Autumn A Why is Richmond Special?	Spring A What's it made of and why?	Summer A How do people tell their stories?	Autumn B How do I care for my body and mind?	Spring B What makes a good home?	Summer B Why is our environment precious?
NUMBER Number and place value	count, read and write numbers to 10 in numerals	count, read and write numbers to 40 in numerals	count, read and write numbers to 100 in numerals	count, read and write numbers to 10 in numerals	count, read and write numbers to 40 in numerals	count, read and write numbers to 100 in numerals
	identify and represent numbers using objects and pictorial representations including the number line	identify and represent numbers using objects and pictorial representations including the number line	identify and represent numbers using objects and pictorial representations including the number line	identify and represent numbers using objects and pictorial representations including the number line	identify and represent numbers using objects and pictorial representations including the number line	identify and represent numbers using objects and pictorial representations including the number line
	count to and across 10, forwards and backwards, beginning with 0 or 1, or from any given number	count to and across 40, forwards and backwards, beginning with 0 or 1, or from any given number		count to and across 10, forwards and backwards, beginning with 0 or 1, or from any given number	count to and across 40, forwards and backwards, beginning with 0 or 1, or from any given number	



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	add and subtract one-digit and two-digit numbers to 10, including zero	add and subtract one-digit and two-digit numbers to 20, including zero	add and subtract one-digit and two-digit numbers to 20, including zero	add and subtract one-digit and two-digit numbers to 10, including zero	add and subtract one-digit and two-digit numbers to 20, including zero	add and subtract one-digit and two-digit numbers to 20, including zero
	solve one-step problems involving addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$	solve one-step problems involving addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$		solve one-step problems involving addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$	solve one-step problems involving addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$	
NUMBER Multiplication and division	count in multiples of twos		count in multiples of twos, fives and tens	count in multiples of twos		count in multiples of twos, fives and tens
	solve one-step problems involving multiplication		solve one-step problems involving multiplication	solve one-step problems involving multiplication		solve one-step problems involving multiplication



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	and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of a teacher		and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of a teacher		and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of a teacher		and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of a teacher
NUMBER Fractions, decimals and percentages		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		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
		solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations	solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations		solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations		solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations



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	representations, and missing number problems.	representations, and missing number problems.	representations, and missing number problems.	representations, and missing number problems.	representations, and missing number problems.	representations, and missing number problems.
	sequence events in chronological order using language such as: 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	sequence events in chronological order using language such as: 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
	recognise and know the value of different denominations of coins and notes	<i>recognise and know the value of different denominations of coins and notes</i>	compare, describe and solve practical problems for: time (quicker, slower, earlier, later)	recognise and know the value of different denominations of coins and notes	<i>recognise and know the value of different denominations of coins and notes</i>	compare, describe and solve practical problems for: time (quicker, slower, earlier, later)
GEOMETRY	recognise and name common		<i>recognise and name common</i>	recognise and name common		<i>recognise and name common</i>



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	2-D, including [for example] rectangles (including squares), circles, triangles.		2-D, including [for example] rectangles (including squares), circles, triangles.	2-D, including [for example] rectangles (including squares), circles, triangles.		2-D, including [for example] rectangles (including squares), circles, triangles.
	recognise and name common 3-D shapes, including [for example] cuboids (including cubes), pyramids and spheres.		recognise and name common 3-D shapes, including [for example] cuboids (including cubes), pyramids and spheres.	recognise and name common 3-D shapes, including [for example] cuboids (including cubes), pyramids and spheres.		recognise and name common 3-D shapes, including [for example] cuboids (including cubes), pyramids and spheres.
	describe position, direction and movement, including whole, half, quarter and three-quarter turns.		describe position, direction and movement, including whole, half, quarter and three-quarter turns.	describe position, direction and movement, including whole, half, quarter and three-quarter turns.		describe position, direction and movement, including whole, half, quarter and three-quarter turns.
STATISTICS						
Year 2	Autumn A	Spring A	Summer A	Autumn B	Spring B	Summer B



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	Why is Richmond Special?	What's it made of and why?	How do people tell their stories?	How do I care for my body and mind?	What makes a good home?	Why is our environment precious?
NUMBER Number and place value	count in steps of 2, 3, and 5 from 0	count in tens from any number, forward or backward	count in steps of 2, 3, and 5 from 0 and count in tens from any number, forward or backward	count in steps of 2, 3, and 5 from 0	count in tens from any number, forward or backward	count in steps of 2, 3, and 5 from 0 and count in tens from any number, forward or backward
	compare and order numbers from 0 up to 100; use <, > and = signs	compare and order numbers from 0 up to 100; use <, > and = signs	identify, represent and estimate numbers using different representations, including the number line	compare and order numbers from 0 up to 100; use <, > and = signs	compare and order numbers from 0 up to 100; use <, > and = signs	identify, represent and estimate numbers using different representations, including the number line
	read and write numbers to at least 100 in numerals and in words	read and write numbers to at least 100 in numerals and in words	use place value and number facts to solve problems	read and write numbers to at least 100 in numerals and in words	read and write numbers to at least 100 in numerals and in words	use place value and number facts to solve problems
	recognise the place value of each digit in a two-digit	recognise the place value of each digit in a two-digit		recognise the place value of each digit in a two-digit	recognise the place value of each digit in a two-digit	



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	number (tens, ones)	number (tens, ones)		number (tens, ones)	number (tens, ones)	
	identify, represent and estimate numbers using different representations, including the number line	identify, represent and estimate numbers using different representations, including the number line		identify, represent and estimate numbers using different representations, including the number line	identify, represent and estimate numbers using different representations, including the number line	
	use place value and number facts to solve problems	use place value and number facts to solve problems		use place value and number facts to solve problems	use place value and number facts to solve problems	
NUMBER Addition and subtraction	recall and use addition and subtraction facts to 20 fluently, <i>and derive and use related facts up to 100</i>	recall and use addition and subtraction facts to 20 fluently, <i>and derive and use related facts up to 100</i>		recall and use addition and subtraction facts to 20 fluently, <i>and derive and use related facts up to 100</i>	recall and use addition and subtraction facts to 20 fluently, <i>and derive and use related facts up to 100</i>	
	show that addition of two numbers can be done in any order			show that addition of two numbers can be done in any order		



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	(commutative) and subtraction of one number from another cannot			(commutative) and subtraction of one number from another cannot		
	add numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones	add numbers using concrete objects, pictorial representations, and mentally, including: two two-digit numbers	add 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 three one-digit numbers	add numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones	add numbers using concrete objects, pictorial representations, and mentally, including: two two-digit numbers	add 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 three one-digit numbers
	add numbers using concrete objects, pictorial representations, and mentally,	add numbers using concrete objects, pictorial representations, and mentally,		add numbers using concrete objects, pictorial representations, and mentally,	add numbers using concrete objects, pictorial representations, and mentally,	



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	including: a two-digit number and tens	including: adding three one-digit numbers		including: a two-digit number and tens	including: adding three one-digit numbers	
	Subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones	subtract numbers using concrete objects, pictorial representations, and mentally, including: two two-digit numbers	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	Subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones	subtract numbers using concrete objects, pictorial representations, and mentally, including: two two-digit numbers	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
	Subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-			Subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-		



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	digit number and tens			digit number and tens		
	solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods		solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods	
	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems
NUMBER	recall and use multiplication		recall and use multiplication	recall and use multiplication		recall and use multiplication



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Multiplication and division	and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers		and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers		and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (\div) and =		calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (\div) and =	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (\div) and =		calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (\div) and =
	show that multiplication of two numbers can be done in any order (commutative)			show that multiplication of two numbers can be done in any order (commutative)		



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	and division of one number by another cannot			and division of one number by another cannot		
	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts			solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts		
NUMBER Fractions, decimals and percentages		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	write simple fractions for example, $\frac{1}{2}$ of 6 = 3		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	write simple fractions for example, $\frac{1}{2}$ of 6 = 3
			recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$			recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$



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MEASUREMENT	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); to the nearest appropriate unit, using rulers and scales	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); to the nearest appropriate unit, using rulers and scales	choose and use appropriate standard units to estimate and measure temperature ($^{\circ}\text{C}$) and capacity (litres/ml) to the nearest appropriate unit, using thermometers and measuring vessels	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); to the nearest appropriate unit, using rulers and scales	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); to the nearest appropriate unit, using rulers and scales	choose and use appropriate standard units to estimate and measure temperature ($^{\circ}\text{C}$) and capacity (litres/ml) to the nearest appropriate unit, using thermometers and measuring vessels
	compare and order length and record the results using $>$, $<$, $=$	Compare and order mass, and record the results using $>$, $<$, $=$	compare and order volume/capacity and record the results using $>$, $<$, $=$	compare and order length and record the results using $>$, $<$, $=$	Compare and order mass, and record the results using $>$, $<$, $=$	compare and order volume/capacity and record the results using $>$, $<$, $=$
	recognise and use symbols for pounds (£) and pence (p); combine	compare and sequence intervals of time tell and write the time to five		recognise and use symbols for pounds (£) and pence (p); combine	compare and sequence intervals of time tell and write the time to five	



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	amounts to make a particular value	minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.		amounts to make a particular value	minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.	
	find different combinations of coins that equal the same amounts of money	Know the number of minutes in an hour and the number of hours in a day		find different combinations of coins that equal the same amounts of money	Know the number of minutes in an hour and the number of hours in a day	
	solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change			solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change		



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GEOMETRY	identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line		use mathematical vocabulary to describe position, direction and movement including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three- quarter turns (clockwise and anti-clockwise), and movement in a straight line	identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line		use mathematical vocabulary to describe position, direction and movement including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three- quarter turns (clockwise and anti-clockwise), and movement in a straight line
	compare and sort common 2-D shapes and everyday objects.		order and arrange combinations of mathematical objects in patterns	compare and sort common 2-D shapes and everyday objects.		order and arrange combinations of mathematical objects in patterns



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	identify and describe the properties of 3D shapes, including the number of edges, vertices and faces			identify and describe the properties of 3D shapes, including the number of edges, vertices and faces		
	compare and sort common 3-D shapes and everyday objects.			compare and sort common 3-D shapes and everyday objects.		
	Identify symmetry in a vertical line			Identify symmetry in a vertical line		
STATISTICS		interpret and construct simple pictograms, tally charts, block diagrams and simple tables	interpret and construct simple pictograms, tally charts, block diagrams and simple tables			
		ask and answer simple questions by counting the number of	ask and answer questions about totalling and comparing			



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		objects in each category and sorting the categories by quantity	categorical data			
<p>Note: Each of the seven blocks is split across 2 terms as part of our spiral curriculum. The objectives for the block have been split across those 2 terms but this is only a suggestion – the curriculum will need adjusting to the needs of different groups who may need to revisit topics or to cover the objectives in a different order. Some objectives are repeated as they will be explored in greater depth when repeated. <i>Objectives in italics are additions to the objectives or suggested ways of splitting an objective.</i></p>						
Year 3	Autumn A Why is Richmond special?	Spring A What is beneath us and why does it matter? Sci – rocks and magnets	Summer A How do we get our message across?	Autumn B How do I care for my body and mind? Sci – skeleton and muscles Digestion	Spring B Why is history worth knowing?	Summer B How can I have my say?
NUMBER Number and place value	count from 0 in multiples of 4, 8, <i>(50 and 1000)</i>	count from 0 in multiples of 4, 8, 50 and 100		count from 0 in multiples of 4, 8, <i>(50 and 1000)</i>	count from 0 in multiples of 4, 8, 50 and 100	
	read and write numbers up to 1000 in numerals and words	solve number problems and practical problems involving these ideas		read and write numbers up to 1000 in numerals and words	solve number problems and practical problems involving these ideas	



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	compare and order numbers up to 1000	find 10 or 100 more or less than a given number		compare and order numbers up to 1000	find 10 or 100 more or less than a given number	
	recognise the place value of each digit in a three-digit number (hundreds, tens, ones)			recognise the place value of each digit in a three-digit number (hundreds, tens, ones)		
	identify, represent and estimate numbers using different representations			identify, represent and estimate numbers using different representations		
NUMBER Addition and subtraction	add and subtract numbers mentally, including a three-digit number and ones, a three-digit number and tens, three-	add and subtract numbers mentally, including a three-digit number and ones, a three-digit number and tens, three-		add and subtract numbers mentally, including a three-digit number and ones, a three-digit number and tens, three-	add and subtract numbers mentally, including a three-digit number and ones, a three-digit number and tens, three-	



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	digit number and hundreds	digit number and hundreds		digit number and hundreds	digit number and hundreds	
	add numbers with up to three digits, using formal written methods of columnar addition	add numbers with up to three digits, using formal written methods of columnar addition		add numbers with up to three digits, using formal written methods of columnar addition	add numbers with up to three digits, using formal written methods of columnar addition	
	subtract numbers with up to three digits, using formal written methods of columnar subtraction	subtract numbers with up to three digits, using formal written methods of columnar subtraction		subtract numbers with up to three digits, using formal written methods of columnar subtraction	subtract numbers with up to three digits, using formal written methods of columnar subtraction	
	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction		solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	



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	estimate the answer to a calculation and use inverse operations to check answers	estimate the answer to a calculation and use inverse operations to check answers		estimate the answer to a calculation and use inverse operations to check answers	estimate the answer to a calculation and use inverse operations to check answers	
NUMBER Multiplication and division	write and calculate mathematical statements for multiplication and division using the multiplication tables that they know (<i>including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods</i>)	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		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	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	
	recall and use multiplication	recall and use multiplication		recall and use multiplication	recall and use multiplication	



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	and division facts for the 3, 4 <i>(and 8 multiplication tables)</i>	and division facts for the 3, 4 and 8 multiplication tables		and division facts for the 3, 4 and 8 multiplication tables	and division facts for the 3, 4 and 8 multiplication tables	
	estimate the answer to a calculation and use inverse operations to check answers	estimate the answer to a calculation and use inverse operations to check answers		estimate the answer to a calculation and use inverse operations to check answers	estimate the answer to a calculation and use inverse operations to check answers	
	solve problems, including missing number problems, involving multiplication and division, <i>(including positive integer scaling problems and correspondence problems in which n objects</i>	solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects		solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects	solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects	



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	<i>are connected to m objects)</i>	are connected to m objects		are connected to m objects	are connected to m objects	
NUMBER Fractions, decimals and percentages	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators		recognise and show, using diagrams, equivalent fractions with small denominators	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators		recognise and show, using diagrams, equivalent fractions with small denominators
	recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators		compare and order unit fractions, and fractions with the same denominators	recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators		compare and order unit fractions, and fractions with the same denominators
	count up and down in tenths;		Add/subtract fractions with the same denominator within one whole	count up and down in tenths;		Add/subtract fractions with the same denominator within one whole



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			(e.g. $5/7 + 1/7 = 6/7$)			(e.g. $5/7 + 1/7 = 6/7$)
	recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10		Solve problems that involve all of the above		recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10	Solve problems that involve all of the above
MEASUREMENT		measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/m)	estimate and read time with increasing accuracy to the nearest minute,		measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/m)	estimate and read time with increasing accuracy to the nearest minute,
		add and subtract amounts of money to give change, using both £ and p in practical contexts	Record and compare time in terms of seconds, minutes, hours and o'clock		add and subtract amounts of money to give change, using both £ and p in practical contexts	Record and compare time in terms of seconds, minutes, hours and o'clock



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		measure the perimeter of simple 2-D shapes	use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight		measure the perimeter of simple 2-D shapes	use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight
		tell and write the time from an analogue clock, including Roman numerals from I to XII, and 12-hour and 24-hour clocks			tell and write the time from an analogue clock, including Roman numerals from I to XII, and 12-hour and 24-hour clocks	
GEOMETRY	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them		Recognise angles as a property of a shape or description of a turn	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them		Recognise angles as a property of a shape or description of a turn
	Identify horizontal and		Identify right angles,	Identify horizontal and		Identify right angles,



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	vertical lines and pairs of perpendicular and parallel lines		recognise that two right angles make a half turn, three make three quarters of a turn and a complete turn; identify whether angles are greater or less than a right angle.	vertical lines and pairs of perpendicular and parallel lines		recognise that two right angles make a half turn, three make three quarters of a turn and a complete turn; identify whether angles are greater or less than a right angle.
STATISTICS		interpret and present data using bar charts, pictograms and tables	solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables		interpret and present data using bar charts, pictograms and tables	solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables
Year 4	Autumn A	Spring A	Summer A	Autumn B	Spring B	Summer B



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	Why is Richmond special?	What is beneath us and why does it matter? Sci – rocks and magnets	How do we get our message across?	How do I care for my body and mind? Sci – skeleton and muscles Digestion	Why is history worth knowing?	How can I have my say?
NUMBER Number and place value	count in multiples of 6, 7, 9, (25 and 1000)	count in multiples of 6, 7, 9, 25 and 1000		count in multiples of 6, 7, 9, (25 and 1000)	count in multiples of 6, 7, 9, 25 and 1000	
	find 1000 more or less than a given number	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		find 1000 more or less than a given number	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	
	Order and compare numbers beyond 1000	count backwards through zero to include negative numbers		Order and compare numbers beyond 1000	count backwards through zero to include negative numbers	
	recognise the place value of	round any number to the		recognise the place value of	round any number to the	



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	each digit in a four-digit number (thousands, hundreds, tens, and ones)	nearest 10, 100 or 1000		each digit in a four-digit number (thousands, hundreds, tens, and ones)	nearest 10, 100 or 1000	
	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	round decimals with one decimal place to the nearest whole number		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	round decimals with one decimal place to the nearest whole number	
	identify, represent and estimate numbers using different representations	solve number and practical problems that involve all of the above and with increasingly large positive numbers		identify, represent and estimate numbers using different representations	solve number and practical problems that involve all of the above and with increasingly large positive numbers	



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	solve number and practical problems that involve all of the above and with increasingly large positive numbers			solve number and practical problems that involve all of the above and with increasingly large positive numbers		
NUMBER Addition and subtraction (objectives repeated)	<i>add and subtract numbers mentally, including a three-digit number and ones, a three-digit number and tens, three-digit number and hundreds</i>	<i>add and subtract numbers mentally, including a three-digit number and ones, a three-digit number and tens, three-digit number and hundreds</i>		<i>add and subtract numbers mentally, including a three-digit number and ones, a three-digit number and tens, three-digit number and hundreds</i>	<i>add and subtract numbers mentally, including a three-digit number and ones, a three-digit number and tens, three-digit number and hundreds</i>	
	add numbers with up to 4 digits using the formal written methods of columnar	add numbers with up to 4 digits using the formal written methods of columnar		add numbers with up to 4 digits using the formal written methods of columnar	add numbers with up to 4 digits using the formal written methods of columnar	



Doing all the good we can

Maths - Progression

	addition where appropriate	addition where appropriate		addition where appropriate	addition where appropriate	
	subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate	subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate		subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate	subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate	
	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why		solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	
	Estimate and use inverse operations to check answers to a calculation	Estimate and use inverse operations to check answers to a calculation		Estimate and use inverse operations to check answers to a calculation	Estimate and use inverse operations to check answers to a calculation	



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Maths - Progression

NUMBER Multiplication and division	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		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	
	multiply two-digit (and three-) digit numbers by a one-digit number using formal written layout	multiply two-digit and three-digit numbers by a one-digit number using formal written layout		multiply two-digit (and three-) digit numbers by a one-digit number using formal written layout	multiply two-digit and three-digit numbers by a one-digit number using formal written layout	
	recall multiplication and division facts for multiplication tables up to 12×12	recall multiplication and division facts for multiplication tables up to 12×12		recall multiplication and division facts for multiplication tables up to 12×12	recall multiplication and division facts for multiplication tables up to 12×12	



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Maths - Progression

	<p>solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, (<i>integer scaling problems and harder correspondence problems such as n objects are connected to m objects</i>)</p>	<p>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 m objects</p>		<p>solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, (<i>integer scaling problems and harder correspondence problems such as n objects are connected to m objects</i>)</p>	<p>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 m objects</p>	
<p>NUMBER Fractions, decimals and percentages</p>	<p>count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and</p>		<p>recognise and show, using diagrams, families of common equivalent fractions</p>	<p>count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and</p>		<p>recognise and show, using diagrams, families of common equivalent fractions</p>



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Maths - Progression

	dividing tenths by ten			dividing tenths by ten		
	compare numbers with the same number of decimal places up to two decimal places		add and subtract fractions with the same denominator	compare numbers with the same number of decimal places up to two decimal places		add and subtract fractions with the same denominator
	recognise and write decimal equivalents of any number of tenths or hundredths		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	recognise and write decimal equivalents of any number of tenths or hundredths		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
	recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$		solve simple measure and money problems involving	recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$		solve simple measure and money problems involving



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Maths - Progression

			fractions and decimals to two decimal places.			fractions and decimals to two decimal places.
	solve simple measure and money problems involving <i>(fractions and)</i> decimals to two decimal places.			solve simple measure and money problems involving <i>(fractions and)</i> decimals to two decimal places.		
MEASUREMENT		estimate, compare and calculate different measures, including money in pounds and pence	Convert between different units of measure [hour to minute]		estimate, compare and calculate different measures, including money in pounds and pence	Convert between different units of measure [hour to minute]
		Convert between different units of measure [kilometre to metre;	read, write and convert time between analogue and digital 12- and 24-hour clocks		Convert between different units of measure [kilometre to metre;	read, write and convert time between analogue and digital 12- and 24-hour clocks
		measure and calculate the	solve problems involving		measure and calculate the	solve problems involving



Doing all the good we can
Maths - Progression

		perimeter of a rectilinear figure (including squares) in centimetres and metres	converting from hours to minutes; minutes to seconds; years to months; weeks to days.		perimeter of a rectilinear figure (including squares) in centimetres and metres	converting from hours to minutes; minutes to seconds; years to months; weeks to days.
		Find the area of rectilinear shapes by counting squares			Find the area of rectilinear shapes by counting squares	
GEOMETRY	compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes		identify acute and obtuse angles; compare and order angles up to two right angles by size	compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes		identify acute and obtuse angles; compare and order angles up to two right angles by size
	identify lines of symmetry in 2-D shapes presented in		describe positions on a 2-D grid as coordinates in	identify lines of symmetry in 2-D shapes presented in		describe positions on a 2-D grid as coordinates in



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Maths - Progression

	different orientations		the first quadrant	different orientations		the first quadrant
	complete a simple symmetric figure with respect to a specific line of symmetry		describe movements between positions as translations of a given unit to the left/right and up/down	complete a simple symmetric figure with respect to a specific line of symmetry		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			plot specified points and draw sides to complete a given polygon
STATISTICS		interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and line graphs	solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs		interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and line graphs	solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs



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Note: Each of the seven blocks is split across 2 terms as part of our spiral curriculum. The objectives for the block have been split across those 2 terms but this is only a suggestion – the curriculum will need adjusting to the needs of different groups who may need to revisit topics or to cover the objectives in a different order. Some objectives are repeated as they will be explored in greater depth when repeated. *Objectives in italics are additions to the objectives or suggested ways of splitting an objective.*

Year 5	Autumn A Why is Richmond special?	Spring A Where does it come from and where does it go?	Summer A How do words make us feel?	Autumn B How do I care for my body and mind?	Spring B What legacy will I leave behind?	Summer B What makes a colourful world?
NUMBER Number and place value	Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000	Round any number up to 1,000,000 to the nearest 10 100 1,000 10,000 and 100,000		Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000	Round any number up to 1,000,000 to the nearest 10 100 1,000 10,000 and 100,000	
	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0	Round decimals with two decimal places to the nearest whole number and to one decimal place		Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0	Round decimals with two decimal places to the nearest whole number and to one decimal place	



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	Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	Solve number problems and practical problems that involve all of the above		Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	Solve number problems and practical problems that involve all of the above	
	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals		Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals	
NUMBER Addition and subtraction (objectives repeated)	Add and subtract numbers mentally with increasingly large numbers	Add and subtract numbers mentally with increasingly large numbers		Add and subtract numbers mentally with increasingly large numbers	Add and subtract numbers mentally with increasingly large numbers	
	Add whole numbers with (more than) 4 digits, including using formal	Add and subtract whole numbers with more than 4 digits, including using formal		Add and subtract whole numbers with (more than) 4 digits, including	Add and subtract whole numbers with more than 4 digits, including using formal written	



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Maths - Progression

	written methods (columnar addition)	written methods (columnar addition and subtraction)		using formal written methods (columnar addition and subtraction)	methods (columnar addition and subtraction)	
	subtract whole numbers with (more than) 4 digits, including using formal written methods (columnar subtraction)					
	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why		Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	
	Use rounding to check answers to calculations and determine,	Use rounding to check answers to calculations and determine, in the		Use rounding to check answers to calculations and determine,	Use rounding to check answers to calculations and determine, in the	



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Maths - Progression

	in the context of a problem, levels of accuracy	context of a problem, levels of accuracy		in the context of a problem, levels of accuracy	context of a problem, levels of accuracy	
NUMBER Multiplication and division	Multiply and divide numbers mentally, drawing upon known facts	Multiply and divide numbers mentally, drawing upon known facts		Multiply and divide numbers mentally, drawing upon known facts	Multiply and divide numbers mentally, drawing upon known facts	
	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, <i>(including long multiplication for two-digit numbers)</i>	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers		Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, <i>(including long multiplication for two-digit numbers)</i>	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	
	Divide numbers up to 4 digits by a one-digit number using the formal written method	Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and		Divide numbers up to 4 digits by a one-digit number using the formal written method	Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and	



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	of short division <i>(and interpret remainders appropriately for the context)</i>	interpret remainders appropriately for the context		of short division <i>(and interpret remainders appropriately for the context)</i>	interpret remainders appropriately for the context	
	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy		Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	
	Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers	Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates		Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers	Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	
	Recognise and use square numbers and cube numbers,	Solve problems involving multiplication and division including		Recognise and use square numbers and cube numbers,	Solve problems involving multiplication and division including	



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	and the notation for squared (2) and cubed (3)	using their knowledge of factors and multiples, squares and cubes		and the notation for squared (2) and cubed (3)	using their knowledge of factors and multiples, squares and cubes	
	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign		Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	
	Establish whether a number up to 100 is prime and recall prime numbers up to 19			Establish whether a number up to 100 is prime and recall prime numbers up to 19		
	Solve problems involving addition, subtraction,			Solve problems involving addition, subtraction,		



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	<p>multiplication and division and a combination of these, including understanding the meaning of the equals sign</p>			<p>multiplication and division and a combination of these, including understanding the meaning of the equals sign</p>		
<p>NUMBER Fractions, decimals and percentages</p>	<p>Recognise mixed numbers and improper fractions and convert from one form to the other. Write mathematical statements >1 as a mixed number</p>		<p>Write a percentage as a fraction with denominator 100, and as a decimal</p>	<p>Recognise mixed numbers and improper fractions and convert from one form to the other. Write mathematical statements >1 as a mixed number</p>		<p>Write a percentage as a fraction with denominator 100, and as a decimal</p>
	<p>Identify, name and write equivalent fractions of a given fraction, represented visually,</p>		<p>Recognise the per cent symbol (%) and understand that per cent relates to 'number of</p>	<p>Identify, name and write equivalent fractions of a given fraction, represented visually,</p>		<p>Recognise the per cent symbol (%) and understand that per cent relates to 'number of</p>



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Maths - Progression

	including tenths and hundredths		parts per hundred'	including tenths and hundredths		parts per hundred'
	Compare and order fractions whose denominators are all multiples of the same number		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 fractions with a denominator of a multiple of 10 or 25	Compare and order fractions whose denominators are all multiples of the same number		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 fractions with a denominator of a multiple of 10 or 25
	Read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$)		Add and subtract fractions with the same denominator and denominators that are multiples of	Read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$)		Add and subtract fractions with the same denominator and denominators that are multiples of



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Maths - Progression

			the same number			the same number
	Read, write, order and compare numbers with up to three decimal places		Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Read, write, order and compare numbers with up to three decimal places		Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents			Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents		
	Solve problems involving numbers with up to three decimal places			Solve problems involving numbers with up to three decimal places		
MEASUREMENT		Use all four operations to solve problems	Understand and use approximate		Use all four operations to solve problems involving	understand and use approximate



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Maths - Progression

		involving measure [for example, length, mass, volume, Money] using decimal notation, including scaling.	equivalences between metric units and common imperial units such as inches, pounds and pints		measure [for example, length, mass, volume, Money] using decimal notation, including scaling.	equivalences between metric units and common imperial units such as inches, pounds and pints
		convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	estimate volume - for example, using 1 cm ³ blocks to build cuboids (including cubes) and capacity (for example, using water)		convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	estimate volume - for example, using 1 cm ³ blocks to build cuboids (including cubes) and capacity (for example, using water)
		measure and calculate the perimeter of composite rectilinear shapes	solve problems involving converting between units of time		measure and calculate the perimeter of composite rectilinear shapes in	solve problems involving converting between units of time



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Maths - Progression

		in centimetres and metres			centimetres and metres	
		calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm ²) and square metres (m ²) and estimate the area of irregular shapes	complete, read and interpret information in timetables		calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm ²) and square metres (m ²) and estimate the area of irregular shapes	complete, read and interpret information in timetables
GEOMETRY	Identify 3-D shapes, including cubes and other cuboids, from 2D representations		Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	Identify 3-D shapes, including cubes and other cuboids, from 2D representations		Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
	Use the properties of		Draw given angles, and	Use the properties of		Draw given angles, and



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	rectangles to deduce related facts and find missing lengths and angles		measure them in degrees ($^{\circ}$)	rectangles to deduce related facts and find missing lengths and angles		measure them in degrees ($^{\circ}$)
	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.		Identify: Angles at a point and one whole turn (total 360°) Angles at a point on a straight line and a half turn (total 180°) Other multiples of 90°	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.		Identify: Angles at a point and one whole turn (total 360°) Angles at a point on a straight line and a half turn (total 180°) Other multiples of 90°
	identify, describe and represent the position of a shape following a translation, using the appropriate language, and		identify, describe and represent the position of a shape following a reflection, using the appropriate	identify, describe and represent the position of a shape following a translation, using the appropriate language, and		identify, describe and represent the position of a shape following a reflection, using the appropriate



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Maths - Progression

	know that the shape has not changed		language, and know that the shape has not changed	know that the shape has not changed		language, and know that the shape has not changed
STATISTICS		complete, read and interpret information in tables	Solve comparison, sum and difference problems using information presented in a line graph.		complete, read and interpret information in tables	Solve comparison, sum and difference problems using information presented in a line graph.
Year 6	Autumn A Why is Richmond special?	Spring A Where does it come from and where does it go?	Summer A How do words make us feel?	Autumn B How do I care for my body and mind?	Spring B What legacy will I leave behind?	Summer B What makes a colourful world?
NUMBER Number and place value	use negative numbers in context, and calculate intervals across zero	multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places		use negative numbers in context, and calculate intervals across zero	multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places	



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	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit	solve number and practical problems that involve all of the above		read, write, order and compare numbers up to 10 000 000 and determine the value of each digit	solve number and practical problems that involve all of the above	
	identify the value of each digit to three decimal places	<i>Round any number to a required degree of accuracy</i>		identify the value of each digit to three decimal places	<i>Round any number to a required degree of accuracy</i>	
NUMBER Addition and subtraction (objectives repeated)	perform mental calculations, including with mixed operations and large numbers	perform mental calculations, including with mixed operations and large numbers		perform mental calculations, including with mixed operations and large numbers	perform mental calculations, including with mixed operations and large numbers	
	solve addition and subtraction multi-step problems in contexts, deciding which operations and	solve problems involving addition and subtraction, multiplication and division		solve addition and subtraction multi-step problems in contexts, deciding which operations and	solve problems involving addition and subtraction, multiplication and division	



Doing all the good we can
Maths - Progression

	methods to use and why			methods to use and why		
	use estimation to check answers to calculations and determine, in the context of a problem, to an appropriate degree of accuracy	use estimation to check answers to calculations and determine, in the context of a problem, to an appropriate degree of accuracy		use estimation to check answers to calculations and determine, in the context of a problem, to an appropriate degree of accuracy	use estimation to check answers to calculations and determine, in the context of a problem, to an appropriate degree of accuracy	
	<i>To add numbers (including decimals) with more than 4 digits, including using formal written methods (columnar addition)</i>	<i>To add numbers (including decimals) with more than 4 digits, including using formal written methods (columnar addition)</i>		<i>To add numbers (including decimals) with more than 4 digits, including using formal written methods (columnar addition)</i>	<i>To add numbers (including decimals) with more than 4 digits, including using formal written methods (columnar addition)</i>	
	<i>To subtract numbers (including decimals) with more than 4</i>	<i>To subtract numbers (including decimals) with more than 4</i>		<i>To subtract numbers (including decimals) with more than 4</i>	<i>To subtract numbers (including decimals) with more than 4 digits, including using</i>	



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	<i>digits, including using formal written methods (columnar subtraction)</i>	<i>digits, including using formal written methods (columnar subtraction)</i>		<i>digits, including using formal written methods (columnar subtraction)</i>	<i>formal written methods (columnar subtraction)</i>	
NUMBER Multiplication and division	perform mental calculations, including with mixed operations and large numbers	perform mental calculations, including with mixed operations and large numbers		perform mental calculations, including with mixed operations and large numbers	perform mental calculations, including with mixed operations and large numbers	
	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	multiply numbers with up to two decimal places by whole numbers		multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	multiply numbers with up to two decimal places by whole numbers	
	divide numbers up to 4 digits by a one-digit number using the formal written method	use written division methods in cases where the answer has up to two decimal places		divide numbers up to 4 digits by a one-digit number using the formal written method	use written division methods in cases where the answer has up to two decimal places	



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	of short division and interpret remainders appropriately for the context			of short division and interpret remainders appropriately for the context		
	identify common factors and common multiples	use their knowledge of the order of operations to carry out calculations involving the four operations		identify common factors and common multiples	use their knowledge of the order of operations to carry out calculations involving the four operations	
	solve problems involving multiplication and division	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 multiplication and division	solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts	
	use estimation to check answers to	solve problems involving similar shapes where the		use estimation to check answers to	solve problems involving similar shapes where the	



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	calculations and determine, in the context of a problem, levels of accuracy	scale factor is known or can be found		calculations and determine, in the context of a problem, levels of accuracy	scale factor is known or can be found	
NUMBER Fractions, decimals and percentages	use common factors to simplify fractions; use common multiples to express fractions in the same denomination		multiply simple pairs of proper fractions, writing the answer in its simplest form, (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$)	use common factors to simplify fractions; use common multiples to express fractions in the same denomination		multiply simple pairs of proper fractions, writing the answer in its simplest form, (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$)
	compare and order fractions, including fractions >1		divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)	compare and order fractions, including fractions >1		divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)
	<i>recognise and write decimal equivalents of any number of tenths or hundredths</i>		solve problems involving the calculation of percentages (e.g. of measures) such as 15% of	<i>recognise and write decimal equivalents of any number of tenths or hundredths</i>		solve problems involving the calculation of percentages (e.g. of measures) such as 15% of



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Maths - Progression

			360 and the use of percentages for comparison			360 and the use of percentages for comparison
	<i>recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$</i>		solve problems which require answers to be rounded to specified degrees of accuracy	<i>recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$</i>		solve problems which require answers to be rounded to specified degrees of accuracy
	associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)		solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)		solve problems involving unequal sharing and grouping using knowledge of fractions and multiples
	recall and use equivalences between simple fractions, decimals and			recall and use equivalences between simple fractions, decimals and		



Doing all the good we can
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	percentages, including in different contexts.			percentages, including in different contexts.		
	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions			add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions		
ALGEBRA		find pairs of numbers that satisfy number sentences with two unknowns			find pairs of numbers that satisfy number sentences with two unknowns	
		enumerate all possibilities of combinations of two variables.			enumerate all possibilities of combinations of two variables.	
		express missing number problems algebraically			express missing number problems algebraically	



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		use simple formulae			use simple formulae	
		Generate and describe linear number sequences			Generate and describe linear number sequences	
		Generate and describe linear number sequences (with fractions)			Generate and describe linear number sequences (with fractions)	
MEASUREMENT		solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	calculate the area of parallelograms and triangles		solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	calculate the area of parallelograms and triangles
		Convert between miles and kilometres	recognise when it is possible to use formulae for area and		Convert between miles and kilometres	recognise when it is possible to use formulae for area and



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			volume of shapes			volume of shapes
		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	Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres, and extend to other units (eg mm ³)		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	Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres, and extend to other units (eg mm ³)
		recognise that shapes with the same areas can have different perimeters and vice versa			recognise that shapes with the same areas can have different perimeters and vice versa	
GEOMETRY	recognise, describe and build simple 3-D		illustrate and name parts of circles,	recognise, describe and build simple 3-D		illustrate and name parts of circles,



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	shapes, including making nets		including radius, diameter and circumference and know that the diameter is twice the radius	shapes, including making nets		including radius, diameter and circumference and know that the diameter is twice the radius
	draw 2-D shapes using given dimensions and angles		recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	draw 2-D shapes using given dimensions and angles		recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
	compare and classify geometric shapes based on their properties and sizes and find unknown angles			compare and classify geometric shapes based on their properties and sizes and find unknown angles		



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	in any triangles, quadrilaterals, and regular polygons			in any triangles, quadrilaterals, and regular polygons		
	describe positions on the full coordinate grid (all four quadrants)			describe positions on the full coordinate grid (all four quadrants)		
	draw shapes on the coordinate plane, and reflect them in the axes			draw shapes on the coordinate plane, and reflect them in the axes		
	draw and translate simple shapes on the coordinate plane			draw and translate simple shapes on the coordinate plane		
STATISTICS		interpret and construct pie charts and line graphs and use these to solve problems	calculate and interpret the mean as an average		interpret and construct pie charts and line graphs and use these to solve problems	calculate and interpret the mean as an average