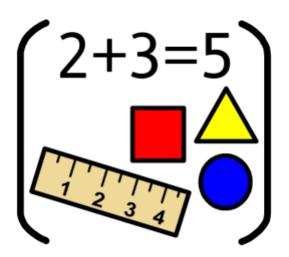


Maths

Subject Intent

At Three Bridges Primary School, we want to **engage**, inspire and challenge pupils, equipping them with the knowledge, vocabulary and skills to experiment and create their own works of art, crafts and designs. The children will appreciate the importance of experimenting and become **resilient** risk takers, able to express themselves through their understanding of art. They will value the work of artists and designers, and the contribution this has to the world around us. We want children to enjoy art through imagination and creative expression, in a **nurturing** and **respectful** environment where we celebrate differences and appreciate different cultures.



Maths progression:

EYFS Statutory	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Non-statutory						
			Number and place value			
 Have a deep understanding of number to 10, including the composition of each number Subitise to 5 Automatically recall number bonds up to 5 and some number bonds to 10, including double facts. Verbally count beyond 20, recognising the pattern of the counting system Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. 	 Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens Given a number, identify one more and one less Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least Read and write numbers from 1 to 20 in numerals and words. 	 Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Recognise the place value of each digit in a two-digit number (tens, ones) Identify, represent and estimate numbers using different representations, including the number line Compare and order numbers from 0 up to 100; use <, > and = signs Read and write numbers to at least 100 in numerals and in words Use place value and number facts to solve problems 	 Count from 0 in multiples of 4, 8, 50 and 100. Compare and order numbers up to 1,000. Read and write numbers to 1,000 in numerals and words. Find 10 or 100 more or less than a given number. Recognise the place value of each digit in a 3-digit number. Identify, represent and estimate numbers using different representations. Solve number problems and practical problems using above. 	 Count in multiples of 6, 7, 9, 25 and 1,000. Order and compare numbers beyond 1,000. Find 1,000 more or less than a given number. Recognise the place value of each digit in a 4-digit number. Read Roman numerals to 100 and know that over time the numeral system changed to include the concept of zero and place value. Identify, represent and estimate numbers using different representations. Round any number to the nearest 10, 100 or 1,000. Count backwards through zero to include negative numbers. Solve number and practical problems with the above (involving increasingly large numbers). 	Read, write, order and compare numbers to at least 1, 000, 000 and determine the value of each digit Count forwards or backwards in steps of powers of 10 for any given number up to 1, 000, 000 Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero Round any number up to 1, 000, 000 to the nearest 10, 100, 1000, 10 000 and 100000 Solve number problems and practical problems that involve all of the above Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	•Read, write, order and compare numbers up to 10, 000, 000 and determine the value of each digit •Round any whole number to a required degree of accuracy •Use negative numbers in context, and calculate intervals across zero •Solve number and practical problems that involve all of the above.

	Number – addition and subtraction								
	•Read, write and	Solve problems with	 Add and subtract 	• Add and subtract	 Add and subtract 	•Use their knowledge			
 Automatically 	interpret mathematical	addition and subtraction:	mentally, including:	numbers with up to 4-	whole numbers with	of the order of			
recall number	statements involving	using concrete	 A 3-digit number 	digits using the formal	more than 4 digits,	operations to carry			
bonds up to 5 and	addition (+),	objects and pictorial	and ones	written methods of	including using formal	out calculations			
some number	subtraction (–) and	representations, including those	 A 3-digit number 	columnar addition	written methods	involving the four			
bonds to 10,	equals (=) signs	involving numbers,	and tens	and subtraction.	(columnar addition	operations			
including double	 Represent and use 	quantities and	 A 3-digit number 	•Estimate and use	and subtraction)	•Solve problems			
facts.	number bonds and	measures	and hundreds	inverse operations to	 Add and subtract 	involving addition,			
•Compare	related subtraction	 applying their 	 Add and subtract 	check answers in a	numbers mentally with	subtraction,			
quantities up to 10	facts within 20	increasing knowledge	numbers with up to	calculation.	increasingly large	multiplication and			
in different	 Add and subtract 	of mental and written	three digits, using	•Solve addition and	numbers	division			
contexts,	one-digit and two-digit	methodsRecall and use addition	formal written	subtraction 2-step	•Use rounding to	 Solve addition and 			
recognising when	numbers to 20,	and subtraction facts to 20	methods of columnar	problems in contexts,	check answers to	subtraction multi-step			
one quantity is	including zero	fluently, and derive and	addition and	deciding which	calculations and	problems in contexts,			
greater than, less	•Solve one-step	use related facts up to 100	subtraction.	operations and	determine, in the	deciding which			
than or the same as	problems that involve	Add and subtract	 Estimate the answer 	methods to use and	context of a problem,	operations and			
the other quantity.	addition and	numbers using concrete	to a calculation and	why.	levels of accuracy	methods to use and			
•Explore and	subtraction, using	objects, pictorial	use inverse operation		•Solve addition and	why			
represent patterns	concrete objects and	representations, and	to check answers.		subtraction multi-step	 Use estimation to 			
within numbers up	pictorial	mentally, including:a two-digit number	 Solve problems, 		problems in contexts,	check answers to			
to 10, including	representations, and	 and ones 	including missing		deciding which	calculations and			
evens and odds,	missing number	 a two-digit number 	number problems,		operations and	determine, in the			
double facts and	problems	and tens	using number facts,		methods to use and	context of a problem,			
how quantities can		• two two-digit numbers	place value, and		why.	an appropriate			
be distributed		adding three one-	more complex			degree of accuracy			
equally.		digit numbers	addition and			 Perform mental 			
		•Show that addition of two	subtraction.			calculations, including			
		numbers can be done in any order (commutative)				with mixed operations			
		and subtraction of one				and large numbers			
		number from another				-			
		cannot							
		•Recognise and use the							
		inverse relationship							
		between addition and							
		subtraction and use this to							
		check calculations and							
		solve missing number							
		problems.							

	Multiplication and division							
Automatically	•Solve one-step	Recall and use	Recall and use	Recall multiplication	 Identify multiples and 	 Multiply multi-digit 		
recall number	problems involving	multiplication and	multiplication and	and division facts up	factors, including	numbers up to 4 digits		
bonds up to 5 and	multiplication and	division facts for the 2, 5	division facts for the 3,	to 12x12.	finding all factor pairs	by a two-digit whole		
some number	division, by calculating	and 10 multiplication	4 and 8x tables.	•Use place value,	of a number, and	number using the		
bonds to 10,	the answer using	tables, including	Write and calculate	known and derived	common factors of	formal written method		
including double	concrete objects,	recognising odd and	mathematical	facts to multiply and	two numbers	of long multiplication		
facts.	pictorial representations	even numbers	statements for	divide mentally,	•Know and use the	• Divide numbers up		
•Explore and	and arrays with the	•Calculate	multiplication and	including: multiplying	vocabulary of prime	to 4 digits by a two-		
represent patterns	support of the teacher.	mathematical	division using the	by 0 and 1; dividing	numbers, prime	digit whole number		
within numbers up		statements for	multiplication tables,	by 1; multiplying	factors and composite	using the formal		
to 10, including		multiplication and	including for 2-digit	together three	(non-prime) numbers	written method of		
evens and odds,		division within the	numbers, using mental	numbers.	•Establish whether a	long division, and		
double facts and		multiplication tables	and progressing to	•Recognise and use	number up to 100 is	interpret remainders		
how quantities can		and write them using	formal written	factor pairs and	prime and recall	as whole number		
be distributed		the multiplication (\times) ,	methods.	commutativity in	prime numbers up to	remainders, fractions,		
equally.		division (÷) and equals	 Solve problems, 	mental calculations.	19	or by rounding, as		
		(=) signs	including missing	•Multiply 2-digit	• Multiply numbers up	appropriate for the		
		 Show that 	number problems,	numbers by a 1-digit	to 4 digits by a one- or	context		
		multiplication of two	involving multiplication	number using formal	two-digit number	• Divide numbers up		
		numbers can be done	and division, including	written layout.	using a formal written	to 4 digits by a two-		
		in any order	integer scaling	•Solve problems	method, including	digit number using the		
		(commutative) and	problems and	involving multiplying	long multiplication for	formal written method		
		division of one number	correspondence	and adding, including	two-digit numbers	of short division where		
		by another cannot	problems in which n	using the distributive	 Multiply and divide 	appropriate,		
		 Solve problems 	objects are	law to multiply 2-digit	numbers mentally	interpreting		
		involving multiplication	connected to m	numbers by 1-digit,	drawing upon known	remainders according		
		and division, using	objects.	integer scaling	facts	to the context		
		materials, arrays,		problems and harder	• Divide numbers up to	 Identify common 		
		repeated addition,		correspondence	4 digits by a one-digit	factors, common		
		mental methods, and		problems such as n	number using the	multiples and prime		
		multiplication and		objects are	formal written method	numbers		
		division facts, including		connected to m	of short division and	 Perform mental 		
		problems in contexts.		objects.	interpret remainders	calculations, including		
					appropriately for the	with mixed operations		
					context	and large numbers		
					 Multiply and divide 	 use estimation to 		
					whole numbers and	check answers to		
					those involving	calculations and		
					decimals by 10, 100	determine, in the		
					and 1000	context of a problem,		
					 Recognise and use 	an appropriate		
					square numbers and	degree of accuracy.		
					cube numbers, and			
					the notation for			
					squared (2) and			
					cubed (3)			



		Numbe	er – fractions (KS2 fractions	, decimals and percenta	ges)	
•	 Recognise, find and 	•Recognise, find, name	•Count up and down	•Count up and down	•Compare and order	•Use common factors
r	name a half as one of	and write fractions 1/3,	in tenths.	in hundredths.	fractions whose	to simplify fractions;
+	two equal parts of an	1/4, 2/4 and 3/4 of a	 Recognise that 	 Recognise that 	denominators are all	use common multiples
C	object, shape or	length, shape, set of	tenths arise from	hundredths arise	multiples of the same	to express fractions in
C	quantity	objects or quantity	dividing an object into	when dividing an	number	the same
•	 Recognise, find and 	Write simple fractions	10 equal parts and in	object by a hundred	 Identify, name and 	denomination
r	name a quarter as one	for example, $\frac{1}{2}$ of 6 = 3	dividing 1-digit	and dividing tenths by	write equivalent	 Compare and order
	of four equal parts of	and recognise the	numbers or quantities	ten.	fractions of a given	fractions, including
	an object, shape or	equivalence of 2/4 and	by 10.	 Recognise and show 	fraction, represented	fractions > 1
C	quantity.	1/2	 Recognise and can 	using diagrams,	visually, including	 Add and subtract
			find and write factions	families of common	tenths and hundredths	fractions with different
			of a discrete set of	equivalent fractions.	 Recognise mixed 	denominators and
			objects: unit fractions	 Add and subtract 	numbers and	mixed numbers, using
			and non-unit fractions	factions within the	improper fractions	the concept of
			with small	same denominator.	and convert from one	equivalent fractions
			denominators.	 Recognise and write 	form to the other and	 Multiply simple pairs
			•Compare and order	decimal equivalents	write mathematical	of proper fractions,
			unit fractions and	to 1/4, 1/2 and ³ / ₄ .	statements > 1 as a	writing the answer in
			factions with the same	Recognise and write	mixed number	its simplest form
			denominators.	decimal equivalents	• Add and subtract	•Divide proper
			Add and subtract	of any number of	fractions with the	fractions by whole
			factions with the same	tenths or hundredths.	same denominator	numbers
			denominator within	•Round decimals with	and denominators	Associate a fraction
			one whole.	one decimal place to	that are multiples of	with division and
			•Solve problems involving the above.	the nearest whole number.	the same numberMultiply proper	calculate decimal fraction equivalents
				Compare numbers	fractions and mixed	for a simple fraction
				with the same number	numbers by whole	•Identify the value of
				of decimal places up	numbers, supported	each digit in numbers
				to 2 decimal places.	by materials and	given to three
				•Find the effect of	diagrams	decimal places and
				dividing a 1-digit or 2-	•Read and write	multiply and divide
				digit number by 10	decimal numbers as	numbers by 10, 100
				and 100, identifying	fractions [for example,	and 1000 giving
				the value of the digits	0.71 = 71/100]	answers up to three
				in the answer as ones,	•Recognise and use	decimal places
				tenths and	thousandths and	•Multiply one-digit
				hundredths.	relate them to tenths,	numbers with up to
				•Solve problems	hundredths and	two decimal places
				involving increasingly	decimal equivalents	by whole numbers
				harder factions and	 Round decimals with 	 Use written division
				fractions to divide	two decimal places to	methods in cases
				quantities, including	the nearest whole	where the answer has
				non-unit fractions	number and to one	up to two decimal
				where the answer is a	decimal place	places
				whole number.		

	 Solve simple measure and money problems involving fractions and decimals to 2 decimal places. Solve problems involving number up to three decimal places Recad, write, order and compare numbers with up to three decimal places Solve problems involving number up to three decimal places Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal Solve problems which require answers to be rounded to specified degrees of accuracy Recal and use equivalences between simple fractions, decimals and percentages, including in different contexts.
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	Measurement							
Make comparisons	•Compare, describe	 Choose and use 	•l can compare	•Compare different	•Convert between	•Solve problems		
between objects	and solve practical	appropriate standard	lengths using m, cm	measures, including	different units of	involving the		
relating to size,	problems for:	units to estimate and	&mm.	money in £ and p.	metric measure (for	calculation and		
length, weight and	Iengths and	measure length/height	•I can compare mass	•Estimate different	example, kilometre	conversion of units of		
capacity.	heights [for	in any direction (m/cm);	using kg & g.	measures, including	and metre;	measure, using		
	example,	mass (kg/g);	•I can compare	money in £ and p.	centimetre and	decimal notation up to		
Compare length,	long/short,	temperature (°C);	volume/capacity	Calculate different	metre; centimetre	three decimal places		
weight	longer/shorter,	capacity (litres/ml) to	using I & ml.	measures. Including	and millimetre; gram	where appropriate		
and capacity.	tall/short,	the nearest appropriate	•l can measure	money in £ and p.	and kilogram; litre	•Use, read, write and		
	double/half]	unit, using rulers, scales,	lengths using m, cm &	•Read, write and	and millilitre)	convert between		
	 mass/weight 	thermometers and	mm.	convert time between	 Understand and 	standard units,		
Begin to describe a	[for example,	measuring vessels	•l can measure mass	analogue and digital 12	use approximate	converting		
sequence of	heavy/light,	Compare and order	using kg & g.	hour clocks.	equivalences	measurements of		
events, real or	heavier than,	lengths, mass,	•Measure	•Read, write and	between metric	length, mass, volume		
fictional, using	lighter than]	volume/capacity and	volume/capacity	convert time between	units and common	and time from a smaller		
words, such as	capacity and	record the results using	using I & ml.	analogue and digital 24	imperial units such	unit of measure to a		
'first', 'then'	volume [for	>, < and =	• Add and subtract	hour clocks.	as inches, pounds	larger unit, and vice		
	example, full/empty,	 Recognise and use symbols for pounds (£) 	lengths using m, cm & mm.	•Solve problems involving converting	and pintsMeasure and	versa, using decimal notation to up to three		
	more than,	and pence (p);	 Add and subtract 	from hours to minutes;	calculate the	decimal places		
	less than, half,	combine amounts to	mass using kg & g.	minutes to seconds;	perimeter of	•Convert between		
	half full,	make a particular value	Add and subtract	years to months; weeks	composite	miles and kilometres		
	quarter]	•Find different	volume/capacity	to days.	rectilinear shapes in	•Recognise that		
	 time [for 	combinations of coins	using I & ml.	•Convert between	centimetres and	shapes with the same		
	example,	that equal the same	•Tell and write the	different units of	metres	areas can have		
	quicker,	amounts of money	time from an	measurements	 Calculate and 	different perimeters		
	slower, earlier,	 Solve simple problems 	analogue clock (12	•Measure and	compare the area	and vice versa		
	later]	in a practical context	hour clock).	calculate the perimeter	of rectangles	 Recognise when it is 		
	•Measure and begin	involving addition and	 Tell and write the 	of a rectilinear figure in	(including squares),	possible to use		
	to record the	subtraction of money of	time from an	cm and m.	and including using	formulae for area and		
	following:	the same unit, including	analogue clock (24	• Find the area of	standard units,	volume of shapes		
	lengths and	giving change	hour clock).	rectilinear shapes by	square centimetres	•Calculate the area of		
	heights	•Compare and	•Tell and write the	counting squares.Calculate different	(cm2) and square	parallelograms and		
	 mass/weight capacity and 	sequence intervals of time	time from an analogue clock		metres (m2) and estimate the area of	trianglesCalculate, estimate		
	 capacity and volume 	•tell and write the time	(Roman numerals).	measures	irregular shapes	and compare volume		
	 time (hours, 	to five minutes,	•Estimate and read		Estimate volume	of cubes and cuboids		
	minutes,	including quarter	time with increasing		[for example, using 1	using standard units,		
	seconds)	past/to the hour and	accuracy to the		cm3 blocks to build	including cubic		
	•Recognise and know	draw the hands on a	nearest minute.		cuboids (including	centimetres (cm3) and		
	the value of different	clock face to show	•Record and		cubes)] and	cubic metres (m3), and		
	denominations of	these times	compare time in terms		capacity [for	extending to other units		
	coins and notes	 Know the number of 	of seconds, minutes		example, using	[for example, mm3 and		
	•Sequence events in	minutes in an hour and	and hours.		water]	km3].		
	chronological order	the number of hours in	•Use the following		•Solve problems			
	using language [for	a day.	vocabulary: o'clock,		involving converting			

example, 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

am, pm, morning, afternoon, noon & midnight. •Know the number of seconds in a minute. •Know the number of days in each month, year and leap year. •Compare the duration of events. •Measure the perimeter of simple 2D shapes. • Add and subtract amounts of money to give change, using both £ and p in a practical context.

between units of time •Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Geometry – properties of shapes								
Talk about and	 Recognise and 	•Identify and describe	 Identify horizontal, 	•Compare and	•Identify 3-D shapes,	•Draw 2-D shapes		
Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Select, rotate and manipulate shapes in order to develop spatial reasoning skills Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.	•Recognise and name common 2-D and 3-D shapes, including: •2-D shapes [for example, rectangles (including squares), circles and triangles] •3-D shapes [for example, cuboids (including cubes), pyramids and spheres]				 Identify 3-D shapes, including cubes and other cuboids, from 2- D representations Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees (o) Identify: angles at a point and one whole turn (total 3600) angles at a point on a straight line and ½ turn (total 1800) other multiples of 90° Use the properties of rectangles to deduce related facts and find missing lengths and angles Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. 	• Draw 2-D shapes using given dimensions and angles • Recognise, describe and build simple 3-D shapes, including making nets • Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.		

		Geo	ometry – position and direc	ction		
Understand position through words alone – for example, "The bag is under the table," – with no pointing. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. Draw information from a simple map. Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern.	•Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	•Order and arrange combinations of mathematical objects in patterns and sequences •Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti- clockwise).	ometry – position and direc	 Describe movements between positions as translations of a given unit to the left/right and up/down. Describe positions on a 2D grid as coordinates in the first quadrant. Plot specified points and draw sides to complete a given polygon. 	•Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	• Describe positions on the full coordinate grid (all four quadrants) • Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
Continue, copy and create repeating patterns.						

	Statistics			
 Interpret and construct simple pictograms, tally charts, block diagrams and simple tables Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity Ask and answer questions about totalling and comparing categorical data. 	 Interpret and present data using bar charts, pictograms and tables. Solve one-step and two-step questions using information presented in scaled bar charts, pictograms and tables 	 Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. 	 Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables 	 Interpret and construct pie charts and line graphs and use these to solve problems Calculate and interpret the mean as an average.
	Ratio and pr	oportion		
				 Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison Solve problems involving similar shapes where the scale factor is known or can be found Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.