Normanton All Saints CE(A) Infant School Maths Progression Plan

(Including EYFS framework, NC and White Rose Maths)

Place Value: Counting			
Nursery	Upper Foundation	Year One	Year 2
3 & 4 year olds will… - Recite numbers past 5. Say one number for each item in order: 1-5. - Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle')	ELG Numerical Patterns - Verbally count beyond 20, recognising the pattern of the counting system	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from nay given number. Count numbers to 100 in numerals; count in multiples of twos, fives and tens.	Count in steps of 2,3, and 5 from 0, and in tens from any number, forward and backwards.
Place Value: Represent			
Nursery	Upper Foundation	Year One	Year 2
3 & 4 year olds will… - Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). - Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.	**ELG Number** - Subitise (recognise quantities without counting) up to 5 ELG Numerical Patterns - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.	• Identify and represent numbers using pictorial representations. • Read and write numbers to 100 in numerals. • Read and write numbers from 1-20 in numerals and words.	• Read and write numbers to at least 100 in numerals and words. • Identify, represent and estimate using different representations, including the number line.
Place Value: Use PV and Compare			
Nursery	Upper Foundation	Year One	Year 2
3 & 4 year olds will… - Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than', 'fewer than'.	ELG Number - Have a deep understanding of number to 10, including the composition of each number	• Given a number, identify one more and one less.	• Recognise the place value of each digit in a three-digit number (tens, ones) • Compare and order numbers from 0 up to 100 ; use <,> and = signs.
Place Value: Problems and Rounding			
Nursery	Upper Foundation	Year One	Year 2
			• Use place value and number facts to solve problems.

Addition and Subtraction: Recall, Represent, Use			
Nursery	Upper Foundation	Year One	Year 2
	ELG Number - Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	• Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equal (=) signs. • Represent and use number bonds and related subtraction facts within 20.	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Show that addition can be done in any order (commutative) and subtraction of one number from another cannot Recognise and use the inverse relationship between addition and subtraction and sue this to check calculations and solve missing number problems.
Addition and Subtraction: Calculations			
Nursery	Upper Foundation	Year One	Year 2
	ELG Numerical Patterns - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity	• Add and subtract one-digit and two-digit numbers to 20, including zero.	• Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ➢ A two-digit number and ones ➢ A two-digit number and tens ➢ Two two-digit numbers ➢ Adding three one-digit numbers.
Addition and Subtraction: Solve Problems			
Nursery	Upper Foundation	Year One	Year 2
		• Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7= □- 9	• Solve problems with addition and subtraction: ➢ Using concrete objects and pictorial representations, including hose involving number quantities and measures. ➢ Applying their increasing knowledge of mental and written methods.

Multiplication and Division: Recall, Represent, Use			
Nursery	Upper Foundation	Year One	Year 2
			Recall and use multiplication and division facts for 2,5 and 10 multiplication tables, including recognising odd and even numbers. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.
Multiplication and Division: Calculations			
Nursery	Upper Foundation	Year One	Year 2
			• Calculate mathematical statements for multiplication and division within the multiplication tables and write them suing the multiplication (x), division (÷), and equals (=) signs.
Multiplication and Division: Solve Problems			
Nursery	Upper Foundation	Year One	Year 2
		• Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	• Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

Multiplication and Division: Combined Operations NB: This is introduced in Year 5

Fractions: Recognise and Write			
Nursery	Upper Foundation	Year One	Year 2
		• 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, name and write fractions ⅓, ¼, 2/4 and ¾ of a length, shape, set of objects or quantity.
Fractions: Compare			
Nursery	Upper Foundation	Year One	Year 2
			Recognise the equivalence of 2/4 and ½
Fractions: Calculations			
Nursery	Upper Foundation	Year One	Year 2
			Write simple fractions for example, ½ of 6 = 3

Fractions: Solve Problems is introduced in Year 3.

Decimals and percentages are introduced in Year 4.

Algebra *B Although algebraic notation is not introduced until year 6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Y1-3*			
Nursery	Upper Foundation	Year One	Year 2
		• Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7= □ - 9	Recognise and use inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

Measurement: Using measures			
Nursery	Upper Foundation	Year One	Year 2
3 & 4 year olds will… - Make comparisons between objects relating to size, length, weight and capacity.	Children in Reception will… - Compare length, weight and capacity	Compare, describe and solve practical problems for: ➢ Length and heights (for example long/short, longer/shorter/tall/short, double/half) ➢ Mass/weight (for example, heavy/light, heavier then, lighter than). ➢ Capacity and volume (for example full/empty, more than, less than, half full, quarter). ➢ Time (for example, quicker, slower, earlier, later) Measures and begins to record the following: ➢ Lengths and heights ➢ Mass/weight ➢ Capacity and volume	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (◦C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. Compare and order lengths, mass, volume/capacity and record the results using >,< and =

		➢ Time (hours, minutes, seconds).	
Measurement: Money			
Nursery	Upper Foundation	Year One	Year 2
		• Recognise and know the value of different denominations of coins and notes.	• Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. • Find different combinations of coins that equal the same amounts of money. • Solve simple problems in a context involving addition and subtraction of money of the same unit, including giving change.
Measurement: Time			
Nursery	Upper Foundation	Year One	Year 2
3 & 4 year olds will… - Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then…'		• Sequence events in chronological order using language (for example, before and after, first, next, 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, draw the hands on a clock face to show these times.	• Compare and sequence intervals of time. • Tell and write the time to five minutes, including quarter past/to the hour and draw hands on a clock face to show these times • Know the number of minutes in an hour and the number of hours in a day.

Measurement : Perimeter, Area and Volume.

This is introduced in Year 3

Geometry: 2-D shapes			
Nursery	Upper Foundation	Year One	Year 2
3& 4 year olds will… - Talk about and explore 2D and 3D shapes - Select shapes appropriately. Combine shapes to make new ones. - Talk about and identify the patterns around them. Use informal language like 'pointy', 'spotty', 'blobs'. Extend	Children in Reception will… - Select, rotate and manipulate shapes in order to develop spatial reasoning skills. - Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.	• Recognise and name common 2-D shapes (for example, rectangles (including squares), circles and triangles).	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Identify 2-D shapes on the surface of 3-D shapes, (for example a circle on a cylinder and a triangle on a pyramid). Compare and sort common 2-D shapes and everyday objects.

and create ABAB patterns. Notice and correct an error in a repeating pattern.	- Continue, copy and create repeating patterns.		

Geometry: 3-D shapes			
Nursery	Upper Foundation	Year One	Year 2
3& 4 year olds will… - Talk about and explore 2D and 3D shapes - Select shapes appropriately. Combine shapes to make new ones.	Children in Reception will… - Select, rotate and manipulate shapes in order to develop spatial reasoning skills. - Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.	• Recognise and name common 3-D shapes (for example, cuboids (including cubes), pyramids and spheres).	• Recognise and name common 3-D shapes (for example, cuboids (including cubes), pyramids and spheres). • Compare and sort common 3-D shapes and everyday objects.

Geometry: Position and Direction			
Nursery	Upper Foundation	Year One	Year 2
3&4 year olds will… - Understand position through words alone - Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'.		• 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 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 anticlockwise.)

Geometry: Angles and Lines: This is introduced in Year 3.

Statistics: Present and Interpret			
Nursery	Upper Foundation	Year One	Year 2
			Interpret and construct simple pictograms, tally charts, block charts and simple tables.

Statistics: Solve problems			
Nursery	Upper Foundation	Year One	Year 2
			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.