East Stour Primary School Maths Progression Summary

	Place Value	Addition and subtraction	Multiplication and division	Fractions, decimals, percentages	Ratio, proportion,algebra	Measure, money, time, (shape, space - EYFS)
Nursery	**Compare quantities using language: 'more than', 'fewer than'.** **Compare quantities using language: 'more than', 'fewer than'.**	**Take part in finger rhymes with numbers.** **Develop counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence.** **Count in everyday contexts, sometimes skipping numbers – '1-2-3-5'.** **Recite numbers past 5.** **Say one number for each item in order: 1,2,3,4,5.** **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.**				**Climb and squeeze themselves into different types or spaces.** **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'.** **Combine objects like stacking blocks and cups. Put objects inside others and take them out again.** **Build with a range of resources.** **Complete inset puzzles** **Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles**

		React to changes of amount in a group of up to three items. **Develop fast recognition of up to 3 objects, without having to count them individually ('subitising').** **Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').** **Experiment with their own symbols and marks as well as numerals.** **Solve real world mathematical problems with numbers up to 5.**				**and cuboids) using informal and mathematical language: 'sides', 'corners', 'straight', 'flat', 'round'.** **Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.** **Combine shapes to make new ones – an arch, a bigger triangle, etc.** **Notices patterns and arrange things in patterns.** **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.** **Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then…'** **Compare sizes, weights**

						etc. using gesture and language – 'bigger/little/smaller', 'high/low', 'tall', 'heavy'. **Make comparisons between objects relating to size, length, weight and capacity.***
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EYFS	**Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.** **Experiment with their own symbols and marks as well as Numerals.** **Count objects, actions and Sounds.** **Compare numbers.**	**Recite numbers past 5.** **Say one number for each item in order: 1, 2, 3, 4, 5.** **Count beyond ten.** **Develop fast recognition of up to 3 objects, without having to count them individually ('subitising').** **Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5.** **Subitise** **Link the number symbol (numeral) with its cardinal number value.** **Solve real world mathematical problems with numbers up to 5.**				**Compare quantities using language: 'more than', 'fewer than',** **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'.** **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:**

		Understand the 'one more than/one less than' relationship between consecutive numbers. **Explore the composition of numbers to 10.** **Automatically recall number bonds for numbers 0-5 and some to 10.**				**'sides', 'corners', 'straight', 'flat', 'round'.** **Select shapes appropriately: flat surfaces for building, a triangular prisms for a roof, etc.** **Combine shapes to make new ones – an arch, a bigger triangle, etc.** **Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.** **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.** **Continue, copy and create repeating patterns.** **Make comparisons between objects relating to size,**

						length, weight and capacity. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...' Compare length, weight and capacity.
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Year 1	**Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count numbers to 100 in numerals; count in multiples of twos, fives and tens Identify and represent numbers using objects and pictorial representations Read and write numbers to 100 in numerals Read and write numbers from 1 to 20 in numerals and words Given a number, identify one more and one less Solve one-step problems that involve addition and**	**Add and subtract one-digit and two digit numbers to 20, including zero**	**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**	**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 that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as** $7 = \square - 9$	**Compare, describe and solve practical problems for: lengths and heights mass/weight capacity and volume time Measure and begin to record the following: lengths and heights mass/weight capacity and volume time (hours, minutes, seconds) Recognise and know the value of different denominations of coins and notes Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] Recognise and use language relating to**

	subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? - 9					**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**
	Place Value	Addition and subtraction	Multiplication and division	Fractions, decimals, percentages	Ratio, proportion,algebra	Measure, money, time, (shape, space)
Year 2	**count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward** **Read and write numbers to at least 100 in numerals and in words** **Identify, represent and estimate numbers using different representations, including the number line** **Recognise the place value of each digit in a two-digit number (tens, ones)** **Compare and order numbers from 0 up to 100; use <, > and = signs**	**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 on** **Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods**	**Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot** **Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs** **Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts,**	**Recognise, find, name and write fractions** $\frac{1}{3}, \frac{1}{4}, \frac{2}{4}$ **and** $\frac{3}{4}$ **of a** **a length, shape, set of objects or quantity** **Recognise the equivalence of** $\frac{2}{4}$ **and** $\frac{1}{2}$ **Write simple fractions for example,** $\frac{1}{2}$ of 6 = 3	**Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems**	**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 =** **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 practical context**

			including problems in contexts			**involving addition and subtraction of money of the same unit, including giving change** **Compare and sequence intervals of time** **Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times** **Know the number of minutes in an hour and the number of hours in a day**
	Place Value	Addition and subtraction	Multiplication and division	Fractions, decimals, percentages	Ratio, proportion,algebra	Measure, money, time, (shape, space)
Year 3	**Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number** **Identify, represent and estimate numbers using different representations** **Read and write numbers up to 1000 in numerals and in words** **Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) compare and order numbers up to 1000**	**Add and subtract numbers mentally, including: a three-digit number and ones a three-digit number and tens a three-digit number and hundreds** **Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction** **Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction**	**Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables** **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** **Solve problems,**	**Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 recognise, find and write fractions of a discrete set of objects: unit fractions and nonunit fractions with small denominators** **Recognise and use fractions as numbers: unit fractions and nonunit fractions with small denominators** **Recognise and show, using diagrams,**	**Solve problems, including missing number problems**	**Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)** **Add and subtract amounts of money to give change, using both £ and p in practical contexts** **Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12- hour and 24-hour clocks** **Estimate and read time with increasing**

			including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	**equivalent fractions with small denominators** **Compare and order unit fractions, and fractions with the same denominators** **Add and subtract fractions with the same denominator within one whole [for example,** $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$**]** **solve problems that involve all of the above**		**accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight** **Know the number of seconds in a minute and the number of days in each month, year and leap year** **Compare durations of events [for example to calculate the time taken by particular events or tasks]**
	Place Value	Addition and subtraction	Multiplication and division	Fractions, decimals, percentages	Ratio, proportion,algebra	Measure, money, time, (shape, space)
Year 4	**Count in multiples of 6, 7, 9, 25 and 1000** **Count backwards through zero to include negative number** **Identify, represent and estimate numbers using different representations** **Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value** **Find 1000 more or less than a given number**	**Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate** **Solve addition and subtraction twostep problems in contexts, deciding which operations and methods to use and why**	**Recall multiplication and division facts for multiplication tables up to 12 × 12** **Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers** **Recognise and use factor pairs and commutativity in mental calculations** **Multiply two-digit and three-digit numbers by a one-digit number**	**Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.** **Recognise and show, using diagrams, families of common equivalent fractions** **Add and subtract fractions with the same denominator** **Solve problems involving increasingly harder fractions to**		**Convert between different units of measure [for example, kilometre to metre; hour to minute]** **Estimate, compare and calculate different measures** **Estimate, compare and calculate different measures, including money in pounds and pence** **Read, write and convert time between analogue and digital 12- and 24-hour clocks**

	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) **Order and compare numbers beyond 1000**		**using formal written layout** **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**	**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** **Recognise and write decimal equivalents to** $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$. **Round decimals with one decimal place to the nearest whole number** **Compare numbers with the same number of decimal places up to two decimal places**		
	Place Value	Addition and subtraction	Multiplication and division	Fractions, decimals, percentages	Ratio, proportion,algebra	Measure, money, time, (shape, space)
Year 5	**Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000** **Count forwards and backwards with positive and negative whole numbers, including through zero** **Read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit**	**Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)** **Add and subtract numbers mentally with increasingly large numbers** **Solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why solve**	**Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19** **Recognise and use square numbers and cube numbers, and the**	**Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths** **• recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example,**		**Convert between different units of metric measure** **Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints** **Use all four operations to solve problems involving measure [for example, length, mass,**

	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals **(read, write) order and compare numbers to at least 1 000 000 and determine the value of each digit**	**problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign multiply and divide numbers mentally drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • multiply and divide whole numbers and those involving decimals by 10, 100 and 100**	**notation for squared (2) and cubed (3)** **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 and divide numbers mentally drawing upon known facts** **Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context** **Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000** **Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes** **Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates** **Solve problems involving addition, subtraction,**	$\frac{2}{5}+\ \ \frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$] **Compare and order fractions whose denominators are all multiples of the same number** **Add and subtract fractions with the same denominator and denominators that are multiples of the same number** **Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams** **Read and write decimal numbers as fractions [for example, 0.71 =** $\frac{71}{100}$] **Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents** **Round decimals with two decimal places to the nearest whole number and to one decimal place** **Read, write, order and compare numbers with up to three decimal places**		**volume, money] using decimal notation, including scaling** **Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days**

			multiplication and division and a combination of these, including understanding the meaning of the equals sign	**Solve simple measure and money problems involving fractions and decimals to two 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 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**		
	Place Value	Addition and subtraction	Multiplication and division	Fractions, decimals, percentages	Ratio, proportion,algebra	Measure, money, time, (shape, space)
Year 6	**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**	**Perform mental calculations, including with mixed operations and large numbers** **Use their knowledge of the order of operations to carry out calculations involving the four operations** **Solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why**	**Identify common factors, common multiples and prime numbers** **Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy** **Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method**	**Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • compare and order fractions, including fractions >1** **Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions**	**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/use of percentages for comparison** **solve problems involving similar shapes where the scale factor is known or can be found**	**Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 d.p. where appropriate** **Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice**

			of long multiplication **Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context** **Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context** **Perform mental calculations, including with mixed operations and large numbers** **Solve problems involving addition, subtraction, multiplication and division** **Use their knowledge of the order of operations to carry out calculations involving the four operations**	**Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example,** $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$**]** **Divide proper fractions by whole numbers [for example,** $\frac{1}{3} \div 2 = \frac{1}{6}$**]** **Identify the value of each digit in numbers given to three decimal places** **Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example,** $\frac{3}{8}$**]** **Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts**	**solve problems involving unequal sharing and grouping using knowledge of fractions and multiples** **Use simple formulae** **Generate and describe linear number sequences** **Express missing number problems algebraically** **Find pairs of numbers that satisfy an equation with two unknowns** **Enumerate possibilities of combinations of two variables**	**versa, using decimal notation to up to 3 d.p.** **Convert between miles and kilometres** **Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa**