

From September 2021

ELG: Number Children at the expected level of development will: - Have a deep understanding of number to 10, including the composition of each number; Subitise (recognise quantities without counting) up to 5; - 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.

ELG: Numerical Patterns Children at the expected level of development will: - 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.

We use the White Rose maths scheme of work for Reception. We monitor and support pupils individual progress using the non-statutory guidance Development Matters.

Children in reception will be learning to: • •	Count objects, actions and sounds. Subitise. Link the number symbol (numeral) with its cardinal number value. Count beyond 10. Compare numbers. 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 0–10.
• • • •	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 0–10. 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. Continue, copy and create repeating patterns. Compare length, weight and capacity.

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Reception

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Getti (Take and p	ing to know this time t get to know children!)	w you to play w the	J	Just like me! It's me 1, 2, 3! Light and E				ght and Da	and Dark		
Spring		Alive in 5	!	Growing 6, 7, 8 Building 9 and 10			Consolidation					
Summer	To 2	20 and Bey	yond	First, then, now Find My Pattern				C)n the Mov	/e		

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Mixed Age Progression - Place Value



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ice Value: Counting	 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 	 count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward 	 count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number 	 count in multiples of 6, 7, 9, 25 and 1000 count backwards through zero to include negative numbers 	 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 	
Pla	Y1/2- Autumn 1 Y1/2- Autumn 3 Y1/2- Spring 2 Y1/2- Summer 3	Y1/2- Autumn 3 Y2/3- Autumn 3	Y2/3- Autumn 1 Y2/3- Autumn 3 Y2/3- Summer 2 Y3/4- Autumn 1 Y3/4- Autumn 3	Y3/4- Autumn 1 Y3/4- Autumn 3 Y4/5- Autumn 1 Y4/5- Autumn 3	zero Y4/5- Autumn 1 Y5/6- Autumn 1	
Place Value: Represent	 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. 	 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 	 identify, represent and estimate numbers using different representations read and write numbers up to 1000 in numerals and in words 	 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 	 read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit 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
	Y1/2- Autumn 1 Y1/2- Autumn 3 Y1/2- Spring 2 Y1/2- Summer 3	Y1/2- Autumn 3 Y2/3- Autumn 3	Y2/3- Autumn 1 Y3/4- Autumn 1	Y3/4- Autumn 1 Y4/5- Autumn 1	Y4/5- Autumn 1 Y5/6- Autumn 1	Y5/6-Autumn 1
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Mixed Age Progression – Place Value



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value : e PV and Compare	 given a number, identify one more and one less Y1/2- Autumn 1 	 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 	 recognise the place value of each digit in a three-digit number (hundreds, tens, ones) compare and order numbers up to 1000 	 find 1000 more or less than a given number recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000 	 (read, write) order and compare numbers to at least 1 000 000 and determine the value of each digit 	 (read, write), order and compare numbers up to 10 000 000 and determine the value of each digit
Us	Y1/2- Autumn 3 Y1/2- Spring 2 Y1/2- Summer 3	Y1/2- Autumn 3 Y2/3- Autumn 3	Y2/3- Autumn 1 Y3/4- Autumn 1	Y3/4- Autumn 1 Y4/5- Autumn 1	Y4/5- Autumn 1 Y5/6- Autumn 1	Y5/6- Autumn 1
Place Value: blems& Rounding		 use place value and number facts to solve problems. 	 solve number problems and practical problems involving these ideas 	 round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers 	 interpret negative numbers in context round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above 	 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
Pro		Y1/2- Autumn 3 Y2/3- Autumn 3	Y2/3- Autumn 1 Y3/4- Autumn 1	Y3/4- Autumn 1 Y4/5- Autumn 1	Y4/5- Autumn 1 Y5/6- Autumn 1	Y5/6- Autumn 1

Don't give up Try new things Resp	spect others Concentrate	Be motivated	Improve	Imagine	Push yourself
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Mixed Age Progression – Addition & Subtraction



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition & Subtraction: Recall, Represent, Use	 read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) 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 of two numbers 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 use this to check calculations and solve missing number problems 	 estimate the answer to a calculation and use inverse operations to check answers 	 estimate and use inverse operations to check answers to a calculation 	 use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy 	
	Y1/2- Autumn 2 Y1/2- Summer 5	Y1/2- Autumn 2 Y2/3- Autumn 2	Y2/3- Autumn 2 Y2/3- Summer 2 Y3/4- Autumn 2	Y3/4- Autumn 2 Y4/5- Autumn 2	Y4/5- Autumn 2 Y5/6- Autumn 2 Y5/6- Summer 3	

Don't give up Try I	new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Mixed Age Progression – Addition & Subtraction



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ddition & Subtraction: Calculations	 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 	 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 	 add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate 	 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 	 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
4	Y1/2- Autumn 2 Y1/2- Summer 5	Y1/2- Autumn 2 Y2/3- Autumn 2	Y2/3- Autumn 2 Y2/3- Summer 2 Y3/4- Autumn 2	Y3/4- Autumn 2 Y4/5- Autumn 2	Y4/5- Autumn 2 Y5/6- Autumn 2 Y5/6- Summer 3	Y5/6- Autumn 2

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Mixed Age Progression - Addition & Subtraction

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Maths

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition & Subtraction: Solve Problems	 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 those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods 	 solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction 	 solve addition and subtraction two-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 problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign 	 solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
	Y1/2- Autumn 2 Y1/2- Summer 5	Y1/2- Autumn 2 Y2/3- Autumn 2	Y2/3- Autumn 2 Y2/3- Summer 2 Y3/4- Autumn 2	Y3/4- Autumn 2 Y4/5- Autumn 2	Y4/5- Autumn 2 Y5/6- Autumn 2 Y5/6- Summer 3	Y5/6- Autumn 2

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yoursel
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Mixed Age Progression – Multiplication & Division



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication & Division: Recall, Represent, Use		 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 	 recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables 	 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 	 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 (non-prime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 recognise and use square numbers, and the notation for squared (²) and cubed (³) 	 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.
		Y1/2- Autumn 3 Y1/2- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1	Y2/3- Autumn 3 Y2/3- Summer 2 Y3/4- Autumn 3	Y3/4- Autumn 3 Y3/4- Spring 1 Y4/5- Autumn 3 Y4/5- Spring 1	Y4/5- Autumn 3 Y5/6- Autumn 2 Y5/6- Summer 3	Y5/6- Autumn 2

Don't give up Try ne	w things Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Mixed Age Progression – Multiplication & Division



 • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication tables and write method is progressing to formal writen methods • Y1/2- Autumn 3 Y1/2- Autumn 3 Y1/2- Autumn 3 Y2/3- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1 Y2/3- Spring 1 Y3/4- Autumn 3 Y3/4- Autum 3 Y3/4- Autum 3 Y
Y1/2- Spring 1 Y2/3- Summer 2 Y3/4- Spring 1 Y4/5- Spring 3 and large numbers Y2/3- Autumn 3 Y3/4- Autumn 3 Y4/5- Autumn 3 Y5/6- Autumn 2 Y2/3- Spring 1 Y3/4- Spring 1 Y4/5- Spring 2 Y5/6- Autumn 2



Mixed Age Progression – Multiplication & Division



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ultiplication & Division: Solve Problems	 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 	 solve problems, 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 	 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 	 solve problems involving multiplication and division including using their knowled 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, multiplication and division
ž	Y1/2- Autumn 3 Y1/2- Spring 1 Y1/2- Summer 5	Y1/2- Autumn 3 Y1/2- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1	Y2/3- Spring 1 Y2/3- Summer 2 Y3/4- Spring 1	Y3/4- Spring 1 Y4/5- Spring 1	Y4/5- Autumn 3 Y4/5- Spring 1 Y5/6- Autumn 2	Y5/6- Autumn 2
Multiplication & Division: Mixed Operations					 solve problems involving addition, subtraction, multiplication and division and a combination of the including understanding the meaning of the equals sign Y4/5- Autumn 3 Y4/5- Spring 1 Y5/6- Autumn 2 	use their knowledge of the order of operations to carry out calculations involving the four operations Y5/6- Autumn 2
e up Tr	y new things R	espect others	Concentrate	Be motivated	Improve	Imagine

Don't give up

Progression in Mathematics skills



Mixed Age Progression – Fractions, Decimals, Percentages



Precognise, find and name a half as one of four equal parts of an object, shape or quantity or quantity are or quantity and objects or quantity are or quantity are of an object, shape or quantity are or quantity are of an object, shape or quantity are of an object, shape or quantity are or quantity count up and down in tenths are sequinate and order and object and the organize find and more organize, find and more organize and more firscitons and more organize, first and more oreacting and more organize, first and more organize, f			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
 Recognise the equivalence of ²/₄ and ¹/₂ Recognise the equivalence of ²/₄ and ¹/₂ recognise and show, using diagrams, equivalent fractions with small denominators compare and order or or	Fractions:	Recognise and Write	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 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity Y1/2- Spring 5 Y2/3- Spring 5 	 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 non-unit fractions and use fractions as numbers: unit fractions and non-unit fractions with small denominators Y2/3- Spring 5 Y3/4- Spring 3 	 count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Y3/4- Spring 4 Y4/5- Spring 3 	• 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} =$ $1\frac{1}{5}$] Y4/5- Spring 2 Y5/6- Autumn 3 Y5/6- Spring 1 Y5/6- Summer 4	
	Fractions:	Compare		 Recognise the equivalence of ²/₄ and ¹/₂ Y1/2- Spring 5 Y2/3- Spring 5 	 recognise and show, using diagrams, equivalent fractions with small denominators compare and order unit fractions, and fractions with the same denominators Y2/3- Spring 5 Y3/4- Spring 3 	 recognise and show, using diagrams, families of common equivalent fractions Y3/4- Spring 3 Y4/5- Spring 2 	 compare and order fractions whose denominators are all multiples of the same number Y4/5- Spring 2 Y5/6- Autumn 3 Y5/6- Spring 1 Y5/6- Summer 4 	 use common factors to simplify fractions; use common multiples to express fractions in the same denomination compare and order fractions, including fractions > 1 Y5/6- Autumn 3



Mixed Age Progression - Fractions, Decimals, Percentages



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
Fractions: Calculations		 write simple fractions for example, ¹/₂ of 6 = 3 Y1/2- Spring 5 Y2/3- Spring 5 	• add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] Y2/3- Spring 5 Y2/3- Summer 4 Y3/4- Summer 3	 add and subtract fractions with the same denominator Y3/4- Spring 3 Y4/5- Spring 2 	 add and subtract fractions with the same denominators and denominators that are multiples of the same number multiply proper fractions and mixed numbers, supported by materials and diagrams Y4/5- Spring 2 Y5/6- Autumn 3 Y5/6- Spring 1 Y5/6- Summer 4 	 add and subtract fractions with different denominators and mixed numbers, us the concept of equivalent fractions. multiply simple pair of proper fractions, writing the answer lits simplest form [f example, ¹/₄ × ¹/₂ = ¹/₈] divide proper fractions by whole numbers [for example, ¹/₃ ÷ 2 = ¹/₈] Y5/6- Autumn 3 	ng 's n yr
Fractions: Solve Problems			 solve problems that involve all of the above Y2/3- Spring 5 Y2/3- Summer 4 Y3/4- Summer 3 	 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 Y3/4- Spring 3 Y4/5- Spring 2 			
Don't give up T	ry new things R	lespect others	Concentrate	Be motivated	Improve	Imagine	Ρι



Mixed Age Progression – Fractions, Decimals, Percentages



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Decimals: ognise and Write				 recognise and write decimal equivalents of any number of tenths or hundredths recognise and write decimal equivalents to ¹/₄, ¹/₂, ³/₄ Y3/4- Spring 4 	 read and write decimal numbers as fractions [for example, 0.71 = ⁷¹/₁₀₀] recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents 	 identify the value of each digit in numbers given to three decimal places
Rec				Y3/4- Summer 1 Y4/5- Spring 3 Y4/5- Summer 1	Y4/5- Spring 3 Y5/6- Spring 2 Y5/6- Summer 4	Y5/6- Spring 2
Decimals: Compare				 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 	 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 	
				Y3/4- Summer 1 Y4/5- Summer 1	Y4/5- Spring 3 Y5/6- Spring 2 Y5/6- Summer 4	

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself



Mixed Age Progression – Fractions, Decimals, Percentages



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Decimals: alculations & Problems				 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 	 solve problems involving number up to three decimal places 	 multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places multiply one-digit numbers with up to two decimal places by whole numbers use written division methods in cases where the answer has up to two decimal places solve problems which require answers to be rounded to specified degrees of accuracy
0				Y3/4- Spring 4 Y4/5- Spring 3	Y4/5- Spring 3 Y4/5- Summer 1 Y5/6- Spring 2 Y5/6- Spring 3 Y5/6- Summer 4	Y5/6- Spring 2

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Mixed Age Progression – Fractions, Decimals, Percentages



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
tions, Decimals and Percentages				 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 ¹/₂, ¹/₄, ¹/₅, ²/₅, ⁴/₅ and those fractions with a denominator of a multiple of 10 or 25 	 associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, ³/₈] recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Frac				Y3/4- Spring 3 Y3/4- Summer 1 Y3/4- Spring 2 Y3/4- Spring 3 Y3/4- Summer 1	Y4/5- Spring 3 Y5/6- Spring 2 Y5/6- Summer 4	Y5/6- Spring 2

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Mixed Age Progression – Ratio and Proportion



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Ratio and Proportion						 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.

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself



Mixed Age Progression - Algebra



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Algebra	 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 the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems 	 solve problems, including missing number problems 			 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.

Note – although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Y1/2/3

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself



Mixed Age Progression - Measurement



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Using Measures	 compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] mass/weight [for example, heavy/light, heavier than, lighter than] capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] time [for example, quicker, slower, earlier, later] measure and begin to record the following: lengths and heights mass/weight capacity and volume time (hours, minutes, seconds) 	 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 = 	 measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) 	 Convert between different units of measure [for example, kilometre to metre; hour to minute] estimate, compare and calculate different measures 	 convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) 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, volume, money] using decimal notation, including scaling 	 solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places 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 versa, using decimal notation to up to three decimal places convert between miles and kilometres
	Y1/2- Spring 3 Y1/2- Summer 2 Y1/2- Summer 4	Y1/2- Spring 3 Y1/2- Summer 4 Y2/3- Spring 3 Y2/3- Summer 3	Y2/3- Spring 3 Y2/3- Summer 3 Y3/4- Spring 2 Y3/4- Spring 4	Y3/4- Spring 2 Y3/4- Summer 2 Y4/5- Autumn 4 Y4/5- Summer 2	Y4/5- Autumn 4 Y4/5- Summer 6 Y5/6- Spring 4 Y5/6- Summer 5	Y5/6- Spring 4

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Mixed Age Progression - Measurement



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Money	 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 practical context involving addition and subtraction of money of the same unit, including giving change 	 add and subtract amounts of money to give change, using both £ and p in practical contexts 	 estimate, compare and calculate different measures, including money in pounds and pence 	 use all four operations to solve problems involving measure [for example, money] 	
	Y1/2- Autumn 2	Y1/2- Autumn 2 Y2/3- Autumn 2	Y2/3- Autumn 2 Y3/4- Summer 1	Y3/4- Summer 1 Y4/5- Summer 1	Y4/5- Summer 1 Y5/6- Spring 3	

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Mixed Age Progression – Measurement



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Time	 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 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 	 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 	 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 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] 	 read, write and convert time between analogue and digital 12- and 24-hour clocks solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days 	 solve problems involving converting between units of time 	 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
	Y1/2- Summer 2	Y1/2- Summer 2 Y2/3- Summer 1	Y2/3- Summer 1 Y3/4- Summer 2	Y3/4- Summer 2 Y4/5- Summer 2	Y4/5- Summer 2 Y5/6- Spring 4	Y5/6- Summer 4

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Mixed Age Progression - Measurement



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Perimeter, Area, Volume			 measure the perimeter of simple 2-D shapes Y2/3- Spring 4 Y3/4- Spring 2 	 measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares Y3/4- Spring 2 Y3/4- Autumn 4 	 measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] Y4/5- Autumn 4 Y4/5-Summer 6 Y5/6- Spring 5 	 recognise that shapes with the same areas can have different perimeters and vice versa recognise when it is possible to use formulae for area and volume of shapes calculate the area of parallelograms and triangles calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m⁵), and extending to other units [for example, mm³ and km³]

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Mixed Age Progression - Geometry



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry: 2-D Shapes	 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 	 draw 2-D shapes Y2/3- Spring 4 	 compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes identify lines of symmetry in 2-D shapes presented in different orientations 	 distinguish between regular and irregular polygons based on reasoning about equal sides and angles. use the properties of rectangles to deduce related facts and find missing lengths and angles 	 draw 2-D shapes using given dimensions and angles compare and classify geometric shapes based on their properties and sizes illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
	Y1/2- Spring 4	Y2/3- Spring 4	Y3/4- Summer 4	Y4/5- Summer 4	Y5/6- Summer 1	Y5/6- Summer 1
Geometry: 5-D Shapes	 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 	 make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them 		 identify 3-D shapes, including cubes and other cuboids, from 2-D representations 	 recognise, describe and build simple 3-D shapes, including making nets
	Y1/2- Spring 4	Y1/2- Spring 4 Y2/3- Spring 4	Y2/3- Spring 4 Y3/4- Summer 4		Y4/5- Summer 4 Y5/6- Summer 1	Y5/6- Summer 1

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself



Mixed Age Progression – Geometry



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry: Angles & Lines			 recognise angles as a property of shape or a description of a turn identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle identify horizontal and vertical lines and pairs of perpendicular and parallel lines 	 identify acute and obtuse angles and compare and order angles up to two right angles by size identify lines of symmetry in 2-D shapes presented in different orientations complete a simple symmetric figure with respect to a specific line of symmetry 	 know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles draw given angles, and measure them in degrees identify: angles at a point and one whole turn (total 360°) angles at a point on a straight line and ¹/₂ a turn (total 180°) other multiples of 90° 	 find unknown angles in any triangles, quadrilaterals, and regular polygons recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
			Y2/3- Spring 4 Y3/4- Summer 4	Y3/4- Summer 4 Y4/5- Summer 4	Y4/5- Summer 4 Y5/6- Summer 1	Y5/6- Summer 1

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Mixed Age Progression - Geometry



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry: Position & Direction	 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) 		 describe positions on a 2-D grid as coordinates in the first quadrant 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 	 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
	Y1/2- Summer 1	Y1/2- Spring 4 Y1/2- Summer 1 Y2/3- Spring 4		Y3/4- Summer 4 Y4/5- Summer 5	Y4/5- Summer 5 Y5/6- Summer 2	Y5/6- Summer 2

Don't give up Try new thin	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Mixed Age Progression – Statistics



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
Statistics: Present and Interpret		 interpret and construct simple pictograms, tally charts, block diagrams and simple tables Y1/2- Spring 2 Y2/3- Spring 2 	 interpret and present data using bar charts, pictograms and tables Y2/3- Spring 2 Y3/4- Summer 3 	 interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs Y3/4- Summer 3 Y4/5- Summer 3 	 complete, read an interpret informat in tables, including timetables Y4/5- Summer 3 Y5/6- Spring 6 	 interpret and construct pie charand line graphs a use these to solv problems Y5/6- Spring 6 	irts ind e
Statistics: Solve Problems		 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 Y1/2- Spring 2 Y2/3- Spring 2 	 solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables Y2/3- Spring 2 Y3/4- Summer 3 	 solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs Y3/4- Summer 3 Y4/5- Summer 3 	 solve comparison sum and different problems using information presented in a line graph Y4/5- Summer 3 Y5/6- Spring 6 	ce calculate and interpret the met an average S Y5/6- Spring 6	in as
Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Pus



		Impact	(end points for each year	r group)		
EYFS	Key S	tage 1		Key S	tage 2	
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Children in Reception will have a deep understanding of number to 10, including the composition of each number. They will know and understanding how to Subitise (recognise quantities without counting) up to 5. They will be able to 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. Children will be able to verbally count beyond 20, recognising the pattern of the counting system. They can compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Children will also be able to explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally	Children in Year 1 will be able to count to thirty and beyond. They will recognise the patterns in counting sequences. They will identify number bonds to ten and twenty. They should be able to add and subtract two groups and write number sentences to show this. They should be able to use resources to show their reasoning. Children should be able to identify a range of simple 2D and 3D shapes and recall basic properties (e.g. corners, faces). They can divide objects into groups and draw simple arrays. They can identify coins and measure simple lengths, heights, capacities and volumes.	Children in Year 2 will be able to count to 100 and beyond, They will use place value to add and subtract a 2digit and a 2digit number beginning to show exchange and carrying. They know their 2, 5, and 10 times table They can name and describe common 2d and 3d shapes. They can show mastery in the way that they use their written methods and understand word problems. They will be confident using bar models and part part whole models. They understand the fractions halves quarters and thirds. They recognize and use coins. They can tell the time to the prostant 15 minutes	Children in Year 3 have a secure understanding of place value to 3 digit numbers, are able to use the column method confidently to add and subtract 3 numbers. They will be able to recall the 2, 5 and 10 times table and have a secure knowledge of the 3,4 and 8 times tables and will be able to use written methods for multiplication and division.	Children in Year 4 have a growing confidence with place value, using these skills within both written and mental calculations for all four operations. Children have developed a better understanding of mathematical reasoning	Children in Year 5 are prepared for KS2 SATS through their knowledge of mathematical concepts and their ability to explain and reason their mathematical thinking using a wide range of vocabulary.	Children in Year 6 are prepared for transition to KS3 through their knowledge of mathematical concepts and their ability to explain and reason their mathematical thinking using a wide range of vocabulary.

Don't give up Try new things Respect others Concentrate Be motivated Improve Imagine Push your	Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Appendix: number facts fluency overview

Addition and subtraction facts

The full set of addition calculations that pupils need to be able to solve with automaticity are shown in the table below. Pupils must also be able to solve the corresponding subtraction calculations with automaticity.

+	0	1	2	3	4	5	6	7	8	9	10
0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10
1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	1+10
2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+9	2+10
3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7	3+8	3+9	3+10
4	4+0	4+1	4+2	4+3	4+4	4+5	4+6	4+7	4+8	4+9	4+10
5	5+0	5+1	5+2	5+3	5+4	5+5	5+6	5+7	5+8	5+9	5+10
6	6 + 0	6+1	6+2	6+3	6+4	6+5	6+6	6+7	6+8	6+9	6+10
7	7+0	7+1	7+2	7+3	7+4	7+5	7+6	7+7	7 + 8	7+9	7+10
8	8+0	8+1	8+2	8+3	8+4	8+5	8+6	8+7	8+8	8+9	8+10
9	9+0	9+1	9+2	9+3	9+4	9+5	9+6	9+7	9+8	9+9	9+10
10	10+0	10+1	10+2	10+3	10+4	10+5	10+6	10+7	10+8	10+9	10+10

Pupils must be fluent in these facts by the end of year 2, and should continue with regular practice through year 3 to secure and maintain fluency. It is essential that pupils have automatic recall of these facts before they learn the formal written methods of columnar addition and subtraction.

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Multiplication and division facts

The full set of multiplication calculations that pupils need to be able to solve by automatic recall are shown in the table below. Pupils must also have automatic recall of the corresponding division facts.

1×1	1 × 2	1×3	1 × 4	1×5	1×6	1×7	1×8	1×9	1 × 10	1 × 11	1 × 12
2 × 1	2 × 2	2 × 3	2 × 4	2 × 5	2×6	2 × 7	2 × 8	2×9	2 × 10	2 × 11	2 × 12
3×1	3×2	3×3	3×4	3×5	3×6	3 × 7	3×8	3×9	3 × 10	3 × 11	3 × 12
4×1	4 × 2	4×3	4 × 4	4 × 5	4 × 6	4 × 7	4 × 8	4×9	4 × 10	4 × 11	4 × 12
5×1	5×2	5×3	5×4	5×5	5×6	5 × 7	5×8	5×9	5 × 10	5 × 11	5 × 12
6×1	6×2	6×3	6 × 4	6×5	6×6	6 × 7	6 × 8	6×9	6 × 10	6 × 11	6 × 12
7×1	7×2	7×3	7 × 4	7×5	7×6	7 × 7	7×8	7×9	7 × 10	7 × 11	7 × 12
8×1	8×2	8×3	8 × 4	8×5	8×6	8×7	8×8	8×9	8 × 10	8 × 11	8 × 12
9×1	9×2	9×3	9×4	9×5	9×6	9×7	9×8	9×9	9 × 10	9 × 11	9 × 12
10 × 1	10 × 2	10 × 3	10 × 4	10 × 5	10 × 6	10 × 7	10 × 8	10 × 9	10 × 10	10 × 11	10 × 12
11 × 1	11 × 2	11 × 3	11 × 4	11 × 5	11 × 6	11 × 7	11 × 8	11 × 9	11 × 10	11 × 11	11 × 12
12 × 1	12 × 2	12 × 3	12 × 4	12 × 5	12 × 6	12 × 7	12 × 8	12 × 9	12 × 10	12 × 11	12 × 12

Pupils must be fluent in these facts by the end of year 4, and this is assessed in the multiplication tables check. Pupils should continue with regular practice through year 5 to secure and maintain fluency.

The 36 most important facts are highlighted in the table. Fluency in these facts should be prioritised because, when coupled with an understanding of commutativity and fluency in the formal written method for multiplication, they enable pupils to multiply any pair of numbers.

Don't give up	Try new things	Respect others	Concentrate	Be motivated	Improve	Imagine	Push yourself
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Factual fluency progression

	Year 1	Year 2	Year 3	Year 4	Year 5
Additive factual fluency	Addition and subtraction within 10.	Addition and subtraction across 10.	Secure and maintain fluency in addition and subtraction within and across 10, through continued practice.		
Multiplicative factual fluency			Recall the 10 and 5 multiplication tables, and corresponding division facts.	Recall the 3, 6 and 9 multiplication tables, and corresponding division facts.	Secure and maintain fluency in all multiplication tables, and corresponding division facts, through continued practice.
			Recall the 2, 4 and 8 multiplication tables, and corresponding division facts.	Recall the 7 multiplication table, and corresponding division facts.	
				Recall the 11 and 12 multiplication tables, and corresponding division facts.	

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897806/Maths_guidance_KS_1_and_2.pdf

Don't give up	Try new things	Respect others
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Improve