



Ashford Oaks Primary School Calculation Policy

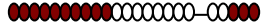
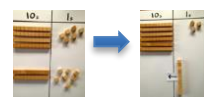
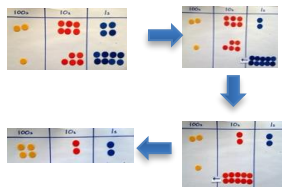
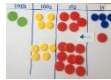
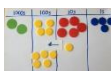
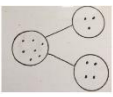
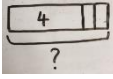
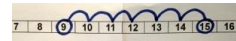
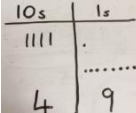
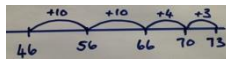
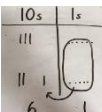
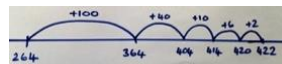
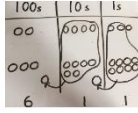
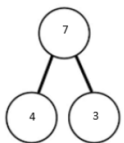
June 2026

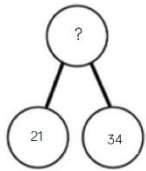
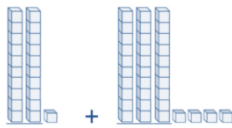
This calculation policy is designed to support teachers and parents in understanding the expectations of the national curriculum in terms of mathematical fluency, and the progression of calculation in a child's mathematical development.

Whilst this calculation policy suggests ways to develop proficiency with the expected formal methods by the end of year 6, readers should be aware that the ultimate goal of the maths curriculum is for children to be able to mentally solve problems, rather than solely relying on a written method.

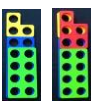
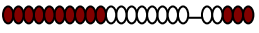
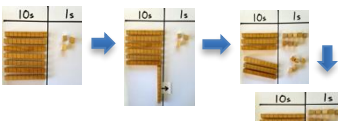
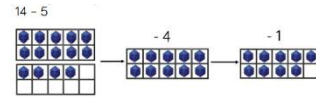
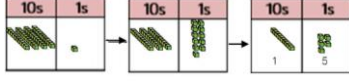
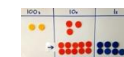
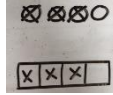
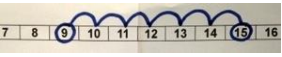
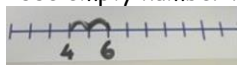
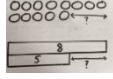
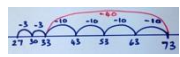
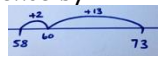
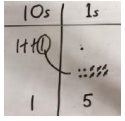
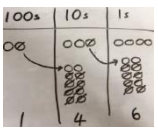
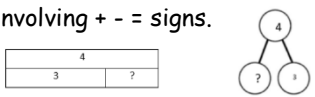
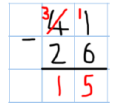
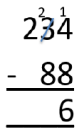
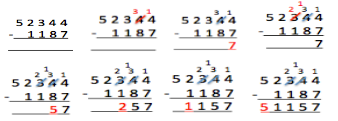
The policy highlights the key areas for each year group in terms of addition, subtraction, multiplication and division. Teachers should identify which stage individual children are working at to best support their learning. Where necessary, teachers should use earlier approaches and materials to bridge any gaps in a child's understanding. For this reason, teachers should have an understanding of the expectations and progression in mathematics for all stages of development, regardless of the year group they teach.

Addition

Skill Progression					
Concrete	-Show number bonds with ten frame or Numicon:  -Count all objects:  -Count on objects: 	-Use a number track/ line/ beadstring to count on:  -Partition using resources to represent 10s and 1s:  -Partition and recombine: $46 + 27 = 60 + 13 = 73$ 	-Place value counters: $264 + 158$  (also use £, 10p and 1p coins)	-Place value counters: Show 2458 and 596.  Combine 1s. Exchange for a 10.  Combine 10s. Exchange for 100.  Combine 100s. Exchange for a 1000 and read final answer. 	-Be able to use appropriate resources to display the working out for an addition calculation. Explain how the resources show the process.
Pictorial	-Represent objects using dots or crosses -Draw a part-whole model  -Draw a bar model to count on rather than count all:  -Count on in 1s on a number track: 	-Use place value:  -Draw lines and dots to represent base 10:  -Count in 10s and bridge: 	-Represent base 10 in place value chart:  -Use numberline:  -Round and adjust on numberline: 	-Represent counters on a place value chart and circle when they exchange: 	-Be able to draw an appropriate diagram to display the working out for an addition calculation. Explain how the diagram shows the process.
Abstract	-Read, write and interpret mathematical statements involving + - = signs. -Solve missing number problems such as $7 = ? + 4$ 	-Round and adjust: $25 + 29 \text{ (add 30 then - 1)}$ -Look for ways to make 10: $\begin{array}{l} 36 + 25 = \\ \swarrow \quad \searrow \\ 1 \quad 5 \quad \quad 36 \end{array}$ $30 + 20 = 50$ $5 + 5 = 10$ $50 + 10 + 1 = 61$ -Add numbers: 2digit and ones, 2digit and tens, two 2digits, three 1digit.	-Add numbers: 3digit and ones, 3digit and tens, 3digit and hundreds	-Formal written methods where appropriate: $\begin{array}{r} 243 \\ +368 \\ \hline 611 \\ 11 \end{array}$ -2-step word problems. Choose which methods to use and why.	-Use column addition: $\begin{array}{r} 23454 \\ +596 \\ \hline 24050 \\ 111 \end{array}$ -Perform mental calculations, including mixed operations and large numbers. -Multi-step word problems.

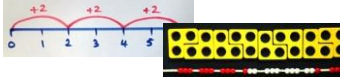
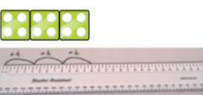
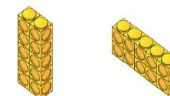
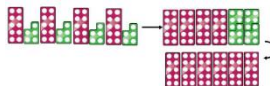
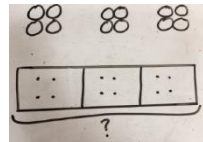
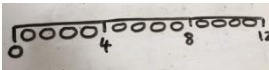
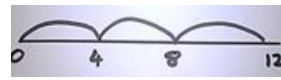
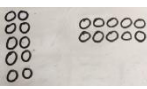
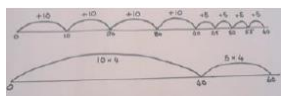
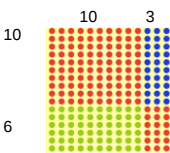
Conceptual Variation	Different ways to ask children to solve $21 + 34$  Word problems: In year 3, there are 21 children and in year 4, there are 34 children. How many children in total? $21 + 34 = 55$. Prove it $\begin{array}{r} 21 \\ +34 \\ \hline \end{array}$ $21 + 34 =$ $= 21 + 34$ Calculate the sum of twenty-one and thirty-four.  Missing digit problems: <table border="1"> <thead> <tr> <th>10s</th> <th>1s</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td>?</td> </tr> <tr> <td>?</td> <td>5</td> </tr> </tbody> </table> <table border="1"> <tr> <td colspan="2">?</td> </tr> <tr> <td>21</td> <td>34</td> </tr> </table>	10s	1s				?	?	5	?		21	34
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	?												
?	5												
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21	34												

Subtraction

Skill Progression 					
Concrete	-Physically take away objects. -Show difference between numbers:  -Count out, then count how many are left:  -Find the difference between numbers with Numicon: 	-Use a numberline, number track, or beadstring to count back:  -Taking away and exchanging:  -Use ten frames: 	-Use base 10 and be able to exchange: 	-Use place value counters to model exchanging: 344- 187 Where's the 187?  - Exchange to make 300 and 30 and 14.  - Take away 7  - Exchange to make 200, 13 tens and 7.  - Take away 80  - Take away 100. 	-Be able to use appropriate resources to display the working out for a subtraction calculation. Explain how the resources show the process.
Pictorial	-Draw the resources and cross out the correct amount:  -Count back on a number track, then a number line:  -Use empty number lines: 	-Draw cubes, or use bar model to show calculation:  -Represent base 10:  -Use a numberline to count back in jumps:  -Find the difference by counting up: 	-Represent base 10 and show the exchange: 	-Represent place value counters and show the exchange: 	-Be able to draw an appropriate diagram to display the working out for a subtraction calculation. Explain how the diagram shows the process.
Abstract	-Read, write and interpret mathematical statements involving + - = signs.  -Solve missing number problems: 7 = 9 - ?	-Subtract numbers: 2digit and ones, 2digit and tens, two 2digit.	-Formal written methods where appropriate.  -Subtract numbers: 3digit and ones, 3digit and tens, 3digit and hundreds	-Column subtraction: Must understand what has happened when they cross out the digits.  -2-step word problems.	-Use column subtraction:  -Perform mental calculations, including mixed operations and large numbers. -Multi-step word problems.

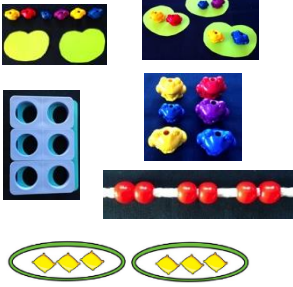
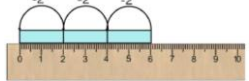
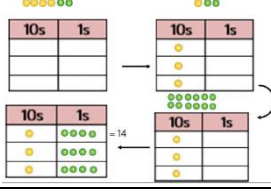
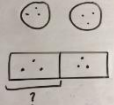
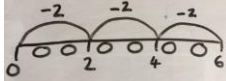
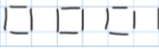
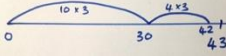
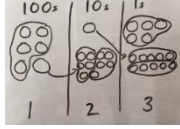
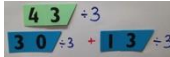
Conceptual Variation	Different ways to ask children to solve 391 - 186 391 ? 186 391 186 ? Raj spent £391, Timmy spent £186. How much more did Raj spend? Calculate the difference between 391 and 186. = 391 - 186 391 -186 What is 186 less than 391? Missing digit calculations 3 9 - 6 0 5					
Need to know	<u>Year 1</u> • 1 less • Number bonds from 10 • Count back • Subtract 10 • Teens subtract 10 • Difference between	<u>Year 2</u> • 10 less • Number bonds from 20 • Subtract 1digit from 2digit by bridging • Partition 2nd number, count back in 10s then 1s • Subtract 10 and multiples of 10 • Subtract near multiples of 10 • Difference between	<u>Year 3</u> • Subtract multiples of 10, 100 • Subtract 1digit by bridging through boundaries • Partition 2nd number • Difference between • Subtract near multiples of 10 and 100 by rounding and adjusting • Difference between	<u>Year 4</u> • Subtract multiples of 10, 100, 1000 • Fluency 2digit - 2digit • Decimal subtraction from 10 or 1 • Partition 2nd number • Difference between • Subtract near multiples by rounding and adjusting • Difference between	<u>Year 5</u> • Subtract multiples of 10, 100, 1000, tenths • Fluency 2digit - 2digit with decimals • Partition 2nd number • Difference between • Adjust numbers to subtract	<u>Year 6</u> • Subtract multiples of 10, 100, 1000, tenths, hundredths • Fluency 2digit - 2digit with decimals • Partition 2nd number • Use number facts, bridging and place value • Adjust numbers to subtract • Difference between

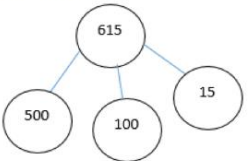
Multiplication

Skill Progression 																																																																		
Concrete	-Repeated grouping/ repeated addition:  	-Use a numberline to show repeated addition:  -Build tables on counting sticks:  -Use numicon or cuisenaire to show repeated groups: 	-Use arrays with counters or objects) to show commutativity:  2 lots of 5 5 lots of 2	-Partition to multiply using numicon, base 10 or cuisenaire: 	-Be able to use appropriate resources to display the working out for a multiplication calculation. Explain how the resources show the process.																																																													
Pictorial	-Represent the resources and use a bar model: 	-Represent the groups along a numberline:  -Empty numberline showing jumps: 	-Represent arrays:  -Use arrays and start to partition. $13 \times 4 = 10 \times 4 + 3 \times 4$  -Use numberlines: 	-Use arrays and partitioning: <table border="1" data-bbox="1464 740 1688 834"><tr><td>X</td><td>40</td><td>3</td></tr><tr><td>6</td><td>240</td><td>18</td></tr></table> 	X	40	3	6	240	18	-Be able to draw an appropriate diagram to display the working out for a multiplication calculation. Explain how the diagram shows the process.																																																							
X	40	3																																																																
6	240	18																																																																
Abstract	-multiplication: $3 \times 4 = 12$ -repeated addition: $4 + 4 + 4 = 12$ -Solve 1-step x problems	-Understand multiplication is commutative and division is not.	-Use arrays to write a range of calculations: $10 = 2 \times 5, 5 \times 2 = 10$ $10 = 5 + 5$ $2 + 2 + 2 + 2 + 2 = 10$ -Use partitioning:  -Multiply numbers: 2digit times 1digit	-Use arrays to support grid method: <table border="1" data-bbox="1543 1155 1789 1219"><tr><td>x</td><td>200</td><td>40</td><td>3</td></tr><tr><td>30</td><td>6000</td><td>1200</td><td>90</td></tr><tr><td>6</td><td>1200</td><td>240</td><td>18</td></tr></table> 7290 1458 8748 -Formal column short multiplication. <table border="1" data-bbox="1731 1243 1789 1329"><tr><td>23</td></tr><tr><td>x 6</td></tr><tr><td>138</td></tr><tr><td>11</td></tr></table> -Multiply three numbers. -Multiply by 0 and 1. -Use factor pairs.	x	200	40	3	30	6000	1200	90	6	1200	240	18	23	x 6	138	11	-Formal long multiplication: <table border="1" data-bbox="1823 1155 2170 1313"><tr><td>5172</td><td>5172</td><td>5172</td><td>5172</td><td>5172</td></tr><tr><td>x 38</td><td>x 38</td><td>x 38</td><td>x 38</td><td>x 38</td></tr><tr><td>0</td><td>60</td><td>2160</td><td>5160</td><td>155160</td></tr><tr><td>5172</td><td>5172</td><td>5172</td><td>5172</td><td></td></tr><tr><td>x 38</td><td>x 38</td><td>x 38</td><td>x 38</td><td></td></tr><tr><td>155160</td><td>155160</td><td>155160</td><td>155160</td><td></td></tr><tr><td>6</td><td>76</td><td>376</td><td>41376</td><td></td></tr><tr><td>1</td><td>51</td><td>15</td><td>1</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td>196536</td></tr></table> -X whole numbers and decimals by 10, 100, 1000 -Find factor pairs, and common factors. -Prime numbers.	5172	5172	5172	5172	5172	x 38	x 38	x 38	x 38	x 38	0	60	2160	5160	155160	5172	5172	5172	5172		x 38	x 38	x 38	x 38		155160	155160	155160	155160		6	76	376	41376		1	51	15	1						196536
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Conceptual Variation	Different ways to ask children to solve 6×23 <table><tr><td>23</td><td>23</td><td>23</td><td>23</td><td>23</td><td>23</td></tr></table> ? Mai had to swim 23 lengths, 6 times a week. How many lengths did she swim in one week? With the counters, prove that $6 \times 23 = 138$ Find the product of 6 and 23 $6 \times 23 =$ $= 6 \times 23$ 6 23 $\times 23$ $\times 6$ What is the calculation? What is the product? <table><tr><th>100s</th><th>10s</th><th>1s</th></tr><tr><td></td><td> </td><td> </td></tr></table>						23	23	23	23	23	23	100s	10s	1s			
23	23	23	23	23	23													
100s	10s	1s																
Need to know	<u>Year 1</u> - Count in 2s, 5s, 10s - Doubles to 10 - Double multiples of 10	<u>Year 2</u> 2, 5, 10 x table - Count in 3s - Doubles to 20 - Multiples of 5	<u>Year 3</u> - Review 2, 5, 10 x table 4, 8, 3, 6 x table - Double 2digit numbers	<u>Year 4</u> - All multiplication facts to 12 x 12 - Double larger numbers and decimals	<u>Year 5</u> - All multiplication facts to 12 x 12 100, 1000 times bigger 10, 100, 10000 times smaller - Double larger numbers and decimals - Partition to multiply mentally	<u>Year 6</u> - All multiplication facts to 12 x 12 - Partition to multiply mentally - Double larger numbers and decimals												

Division

Skill Progression 					
Concrete	-Sharing objects in groups: 	-Sharing: $15 \div 3 = 5$ in a group  -Grouping: $15 \div 3 = 5$ groups of 3  -Repeated subtraction: 	-Use rods to divide with remainders: $13 \div 4$  -Sharing using place value counters: $42 \div 3 = 14$ 	-Short division using place value counters to group: $615 \div 5$ Group into 5 hundreds. Exchange. Group into 5 tens. Exchange. Group into 5 ones. 	-Be able to use appropriate resources to display the working out for a division calculation. Explain how the resources show the process.
	-Represent the sharing: 	-Represent objects with dots and share equally:  -Represent repeated subtraction:  -Abstract numberline to represent equal groups: 	-Represent rods pictorially:  -Represent place value counters:  -Grouping using partitioning: 	-Represent counters and show exchanging:  -Chunking on numberline: 	-Be able to draw an appropriate diagram to display the working out for a division calculation. Explain how the diagram shows the process.
	-Halving: $6 \div 2 = 3$  -Solve 1 step $\div$ problems	-Understand multiplication is commutative and division is not.	-Grouping using partitioning:  -Calculate mathematical statements for division using times table knowledge.	-Group using partitioning: $196 \div 6$.  -Formal short division:  -Use factor pairs. -Divide by 1. -Divide by 1 and 0	-Long division by chunking or using short division method. - $\div$ whole numbers and decimals by 10, 100, 1000

Conceptual Variation	Different ways to ask the children to solve $615 \div 5$ Using the part whole model below, how can you divide 615 by 5 without using short division?  I have £615 and share it equally between 5 bank accounts. How much will be in each account? 615 pupils need to be put into 5 groups. How many will be in each group? What is the calculation? What is the answer?  $5 \overline{)615}$ $615 \div 5 =$ $\square = 615 \div 5$					
Need to know	<u>Year 1</u> - Count back in 2s, 5s, 10s - Halves to 10 - Halve multiples of 10 - How many 2s? 5s? 10s?	<u>Year 2</u> - Division facts 2, 5, 10 x tables - Halves to 20 - Count back in 3s	<u>Year 3</u> - Review division facts 2, 5, 10 x tables - Division facts 4, 8, 3, 6 x table - Halve 2digit numbers	<u>Year 4</u> - Division facts to 12×12 - Halve larger numbers and decimals	<u>Year 5</u> - Division facts to 12×12 100, 1000 times smaller - Partition to divide mentally - Halve larger numbers and decimals	<u>Year 6</u> - Division facts to 12×12 - Partition to divide mentally - Halve larger numbers and decimals

Maths Vocabulary

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1 more/ 1 less Equal to More than/Less than Most/Least Add/Put together/Total/ Altogether Take away/Distance between/Difference between Doubling/Halving Groups of Half/Quarter Part of a whole Long/Short Heavy/Light Full/ Empty/Half Full Earlier/Later Quicker/Slower Hours/Minutes/Seconds Pounds/Pence Before/After/First/Next Today/Tomorrow/Yesterday Morning/Afternoon/Evening Days/Weeks/Months/Years Hour/Half Past/ O'clock Common 2d shapes Common 3d shapes Whole turn/Half turn/ Quarter turn/ $\frac{3}{4}$ turn	<u>Year 1 vocabulary +</u> Partition Place holder Add Subtract Inverse Sum Difference Odd/Even Multiply Divide Arrays Repeated addition Repeated subtraction Grouping/Sharing Third/One quarter/Three quarters m/ cm kg/ g l/ ml °C Finding change Analogue Minutes to/ Minutes past Line symmetry Sides of a 2d shape Edges/ Faces/ Vertices Quadrilateral/ Polygon Rotation Clockwise/ Anti-clockwise Pictogram/Tally Chart/Tables/ Block diagrams	<u>Year 1 & 2 vocabulary +</u> Column addition Column subtraction Estimate Tenths Equivalent fractions Denominator m/ cm/ mm Perimeter Roman numerals Digital/ Analogue Am/ Pm Noon/ Midnight Years/ Leap years Angles Right angles/ Acute/ Obtuse Greater than/ Less than Horizontal/ Vertical Perpendicular/ Parallel Bar charts How many more? How many fewer?	<u>Year 1, 2 & 3 vocabulary +</u> 1000 more/ 1000 less Negative numbers Rounding Factor pairs Hundredths Fractions of a length Fractions of a shape Simplify fractions Decimals Ones/ Tenths/ Hundredths 1 decimal place/ 2 decimal places Factors/ Multiples m/ km Area Isosceles/Equilateral/ Right-angled/ Scalene Protractor Co-ordinates Translations	<u>Year 1,2,3 & 4 vocabulary +</u> Power of ten Common factors Prime numbers Prime factors Composite numbers Square numbers Cube numbers Mixed numbers Improper fractions Thousandths 3 decimal places Percentage % Proportion Imperial measurements/ Inches/ Pounds (lb)/ Pints Volume Capacity Reflex angles Reflection Line graph Timetables	<u>Year 1,2,3,4 & 5 vocabulary +</u> Common multiples Order of operations/ Brackets Ratio Scale factor Algebra Formula/ Equation Variables Miles Radius/ Diameter/ Circumference Nets Pie charts Mean/ Median/ Mode

Ready to Progress Criteria

Number and Place Value (NPV)	
Year 1	1NPV-1 Count within 100, forwards and backwards, starting with any number. 1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$
Year 2	2NPV-1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and nonstandard partitioning. 2NPV-2 Reason about the location of any two digit number in the linear number system, including identifying the previous and next multiple of 10.
Year 3	3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10. 3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning. 3NPV-3 Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. 3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.
Year 4	4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. 4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning. 4NPV-3 Reason about the location of any four digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each. 4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.
Year 5	5NPV-1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. 5NPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning. 5NPV-3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. 5NPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. 5NPV-5 Convert between units of measure, including using common decimals and fractions.
Year 6	6NPV-1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). 6NPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and nonstandard partitioning. 6NPV-3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts. 6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.

Number Facts (NF)

Year 1	1NF-1 Develop fluency in addition and subtraction facts within 10. 1NF-2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.
Year 2	2NF-1 Secure fluency in addition and subtraction facts within 10, through continued practice.
Year 3	3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice. 3NF-2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number. 3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).
Year 4	4NF-1 Recall multiplication and division facts up to 12×12 , and recognise products in multiplication tables as multiples of the corresponding number. 4NF-2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context. 4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)
Year 5	5NF-1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice. 5NF-2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).
Year 6	-

Addition and Subtraction (AS)

Year 1	1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. 1AS-2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.
Year 2	2AS-1 Add and subtract across 10. 2AS-2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?". 2AS-3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two digit number. Understand and use the commutative property of addition, and understand the related property for subtraction. 2AS-4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two digit numbers.
Year 3	3AS-1 Calculate complements to 100. 3AS-2 Add and subtract up to three-digit numbers using columnar methods. 3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure.
Year 4	-
Year 5	-
Year 6	6AS/MD-1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).

	6AS/MD-3 Solve problems involving ratio relationships. 6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. 6AS/MD-4 Solve problems with 2 unknowns.
Multiplication and Division (MD)	
Year 1	-
Year 2	2MD-1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables. 2MD-2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).
Year 3	3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.
Year 4	4MD-1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. 4MD-2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication. 4MD-3 Understand and apply the distributive property of multiplication.
Year 5	5MD-1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size. 5MD-2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors. 5MD-3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. 5MD-4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context.
Year 6	For year 6, MD ready-to progress criteria are combined with AS ready to-progress criteria (please see above).
Fractions (F)	
Year 1	-
Year 2	-
Year 3	3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. 3F-2 Find unit fractions of quantities using known division facts (multiplication tables fluency). 3F-3 Reason about the location of any fraction within 1 in the linear number system. 3F-4 Add and subtract fractions with the same denominator, within 1.
Year 4	4F-1 Reason about the location of mixed numbers in the linear number system. 4F-2 Convert mixed numbers to improper fractions and vice versa. 4F-3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.
Year 5	5F-1 Find non-unit fractions of quantities. 5F-2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system. 5F-3 Recall decimal fraction equivalents for $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{5}$ and $\frac{1}{10}$ and for multiples of these proper fractions.
Year 6	6F-1 Recognise when fractions can be simplified, and use common factors to simplify fractions. 6F-2 Express fractions in a common denomination and use this to compare fractions that are similar in value.

	6F-3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.
Geometry (G)	
Year 1	1G-1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another. 1G-2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.
Year 2	2G-1 Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties.
Year 3	3G-1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations. 3G-2 Draw polygons by joining marked points, and identify parallel and perpendicular sides.
Year 4	4G-1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant. 4G-2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons. 4G-3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.
Year 5	5G-1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size. 5G-2 Compare areas and calculate the area of rectangles (including squares) using standard units.
Year 6	6G-1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.

Early Learning Goals
Number - 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.
Numerical Patterns - 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.