

Mathematics Progression Document

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number	<p>Recognising numbers to 5. To be able to recognise the numerals to 5. To be able to count reliably (with one-to-one correspondence and understanding of cardinality) up to five forwards and backwards.</p> <p>Sorting/comparing to 5. To be able to count reliably (with one-to-one correspondence and understanding of cardinality) up to five forwards and backwards. To be able to compare numbers, order and write numbers to five.</p> <p>Recognising numbers to 10. To be able to recognise the numerals to 10. To be able to count reliably</p>	<p>Count to 100 (first 0-10, then to 20, then to 40 then to 100). To understand the ordinal aspects of number. To be able count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.</p> <p>Read and write numbers from 0-100 (first 0-10, then to 20, then to 40 then to 100). To be able to count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. To be able Identify and write numbers to 100.</p> <p>Compare and order numbers from 0-100 (first 0-10, then to 20,</p>	<p>Count to 100. To be able to count accurately. To be able to count in steps of 1, 2, 5 and 10 to 100. To identify the previous and next multiple of 10.</p> <p>Read and write numbers to 100. To be able to read numbers to 100 accurately. To know how to write numbers to 100 accurately.</p> <p>Compare and arrange numbers within 100. To recognise the place value of each digit in 2-digit numbers. To understand what greater than, less than means and the associated symbols. To arrange numbers from smallest to</p>	<p>Count to 1,000. To be able to count accurately. To know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10. To apply this to identify and work out how many 10s there are in other three-digit multiples of 10. To know the place value of each digit in three-digit numbers. To be able to and compose and decompose three-digit numbers using standard and non-standard partitioning.</p> <p>Count in hundreds, tens and ones. To be able to count accurately. To know the place value of</p>	<p>Count to 10,000. To be able to count accurately. To know that 100 hundreds are equivalent to 10,000, and that 10000 is 10 times the size of 1000.</p> <p>Count in thousands, hundreds, tens and one. To be able to count in thousands, hundreds, tens and ones. To be able to compare numbers beyond 1000.</p> <p>Count in twenty-fives. To count in multiples of 25's.</p> <p>Count in sixes, sevens and nines. To count in multiples of 6, 7 and 9. To recall multiplication</p>	<p>Read and write numbers to 1,000,000. To be able to read, write, numbers to at least 1 000 000.</p> <p>Tell the place value of a digit in a number. To determine the value of each digit.</p> <p>Compare and arrange numbers within 1,000,000. To be able to order and compare numbers to at least 1 000 000.</p> <p>Count forwards or backwards in steps of 1000, 10,000 and 100,000</p> <p>To be able to count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.</p>	<p>Read and write numbers to 10 million. To be able to read, write, order and compare numbers up to 10 000 000.</p> <p>Compare and arrange numbers within 10 million.</p> <p>To be able to compare and arrange numbers up to 10 000 000.</p> <p>Tell the place value of a digit in a number.</p> <p>To determine the value of each digit.</p> <p>Round numbers to the nearest 10, 100, 1000, 10,000, 100,000 and 1,000,000</p> <p>To round any whole number to</p>

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	<p>(with one-to-one correspondence and understanding of cardinality) up to ten forwards and backwards. Count reliably to 10. To be able to count reliably (with one-to-one correspondence and understanding of cardinality) up to ten forwards and backwards.</p> <p>Sorting/comparing to 10. To be able to count reliably (with one-to-one correspondence and understanding of cardinality) up to ten forwards and backwards. To be able to compare numbers, order and write numbers to ten. Verbally count reliably to 20. To be able to count verbally</p>	<p>then to 40 then to 100). To be able to count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. To be able to identify and write numbers to 100. To be able to represent and identify numbers using objects and pictorial representations, including the number line, and use the following language: 'equal to', 'more than', 'less than' (fewer), 'most' and 'least'. To be able to identify 1 more and 1 less than a given number. To be able to use and understand the language 'more than' when describing and comparing</p>	<p>greatest and greatest to smallest.</p> <p>Make and complete number patterns. To be able to count in steps of 2, 3, 5 and 10 from any number forwards and backwards.</p>	<p>each digit in three-digit numbers. To apply this to identify and work out how many 10s there are in other three-digit multiples of 10.</p> <p>To be able to and compose and decompose three-digit numbers using standard and non-standard partitioning.</p> <p>Count in fifties. To be able to count accurately. To know multiples of ten and fifties. To be able to 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.</p>	<p>and division facts up to 12×12, and recognise products in multiplication tables as multiples of the corresponding number.</p> <p>Tell the number that a digit stands for. To recognise the place value for each digit in a 4 digit number.</p> <p>Compare and arrange numbers within 10,000. To compare numbers within 10,000 using the words greater than and smaller than. To arrange numbers within 10,000 according to the criteria.</p> <p>Describe and complete number patterns.</p>	<p>Round numbers to the nearest 10, 100, 1000, 10,000 and 100,000.</p> <p>To be able to round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.</p>	<p>a required degree of accuracy.</p>
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	<p>knowing all the number names. Count irregular arrangements within 10. Odds and evens.</p> <p>To be able to count reliably (with one-to-one correspondence and understanding of cardinality) up to ten forwards and backwards.</p> <p>To be able to find the total number of items in two groups by counting all of them within ten (for example, $3 + 2$).</p> <p>To be able to recognise odd and even numbers using objects and numerals.</p> <p>Subitise to 5.</p> <p>To be able to subitize quickly recognizing and naming the number in a</p>	<p>Make different number bonds for numbers up to 10.</p> <p>To be able represent and use number bonds, and related subtraction facts within 10.</p> <p>Make number stories.</p> <p>To be able to create a number story using number bonds.</p> <p>Complete number patterns.</p> <p>To be able to recognise and complete number patterns within numbers of 100.</p> <p>Use a place-value chart to show numbers in tens and ones.</p> <p>To be able to use and recognise a 2-digit number.</p>		<p>Count in four and eights.</p> <p>To know all even numbers. To be able to count from 0 in multiples of 4 and 8.</p> <p>Tell the value of a digit in a number.</p> <p>To know the place value of each digit in three-digit numbers.</p> <p>To apply this to identify and work out how many 10s there are in other three-digit multiples of 10.</p> <p>To be able to and compose and decompose three-digit numbers using standard and non-standard partitioning.</p> <p>Compare and arrange numbers within 1,000.</p> <p>To apply this to identify and work out how many</p>	<p>To be able to make number patterns using 100, 10, 1 'more' and 'less'.</p> <p>Round numbers and estimate sum and difference.</p> <p>To be able to round any number to the nearest 10, 100 or 1000.</p> <p>To be able to estimate answers using number knowledge.</p>		
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	group without counting.	<p>To understand the value of tens and ones. To be able to create a 2-digit number using tens and ones on a place value chart.</p> <p>Find how much more. To be able to use and understand the language 'more than' when describing and comparing. To be able to use count on to find how many more.</p> <p>Count in twos, fives and tens to 100. To recognise numerals to 100. To be able to count in multiples of 5 and 10 to 100.</p> <p>Say a number that is 1 more or 1 less than a 2-digit number.</p>		<p>10s there are in other three-digit multiples of 10. To be able to 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. To be able to compose and decompose three-digit numbers using standard and non-standard partitioning. To know the place value of each digit up to a four-digit number. Complete number patterns. To be able to count accurately. To know odd and even numbers. To be able to find 100 more or</p>			
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		To recognise numerals to 100. To be able to recognise a number that is 1 more or 1 less than any 2-digit number.		100 less than a given number. To be able to 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. number.			
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition and Subtraction (Whole Number)	<p>Number bonds to 5. To recognise the numerals 1 – 5. To be able to touch count. To understand the quantitative aspects of number. To be able to add to 5.</p> <p>One more/one less to 5. To recognise the numerals 1 – 5. To be able to touch count. To understand the quotative aspects of number. To understand the language one more/ one less. To be able to say a number that is one more or one less.</p>	<p>Add by counting. To understand the concept of addition. To know how to touch count accurately. To be able count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. To know how to count a group of objects. Add by counting on. To know how to touch count accurately. To be able count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.</p>	<p>Add numbers without renaming. To be fluent in recalling addition facts within 10. To be able to add 2-digit numbers without renaming, using concrete objects. To be able to add 2-digit numbers without renaming, using pictorial representations. To be able to add 2-digit numbers without renaming, mentally. To be able to add 2-digit numbers without renaming, using a formal written method. Add numbers with renaming.</p>	<p>Add numbers without renaming. To be fluent in addition and subtraction facts that bridge 10. To know the place value of each digit in three-digit numbers. To be able to add and subtract numbers mentally, including a 3-digit number (hundreds, tens and ones). To be able to add numbers with up to 3 digits, using formal written methods of columnar addition without renaming. Add numbers with renaming.</p>	<p>Add numbers without renaming. To be fluent in addition and subtraction facts that bridge 10. To know the place value of each digit in four-digit numbers. To be able to add and subtract numbers mentally, including a 4-digit number (thousands, hundreds, tens and ones). To be able to add numbers with up to 4 digits, using formal written methods of columnar</p>	<p>Add whole numbers with more than 7 digits. To be able to add whole numbers with more than 7 digits. Add numbers mentally. To be able to add numbers mentally with increasingly large numbers. Subtract whole numbers with more than 7 digits. To be able to subtract whole numbers with more than 7 digits.</p>	<p>Perform mental calculations. To perform mental calculations, including with mixed operations and large numbers. Use estimation to check answers to calculations. To use estimation to check answers to calculations. Use the order of operations. To be able to use knowledge of the order of operations to carry out calculations</p>

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	<p>Some number bonds to 10 (inc doubles.) To recognise the numerals 1 – 10. To be able to touch count. To understand the quotative aspects of number. To be able to add to 10. To understand the concept of doubling.</p> <p>Using quantities and objects, subtract 2 single-digit numbers and count on or back to find the answer with numbers to 10. To recognise the numerals 1 – 10. To be able to touch count. To understand the quantitative aspects of number. To be able to subtract within 10. To be able to count on and</p>	<p>To know how to count a group of objects. To be able to count on from a given number. Make addition stories. To be able to create an addition story using appropriate language. To read, write and interpret equations containing addition (+) and equals (=) symbols, and relate additive expressions and equations to real-life contexts. Write addition equations. To read, write and interpret equations containing addition (+) and equals (=) symbols and relate additive expressions.</p> <p>Subtract by crossing out.</p>	<p>To recall and use addition facts to 20 fluently. To be able to add 2-digit numbers with renaming, using concrete objects. To be able to add 2-digit numbers with renaming, using pictorial representations. To be able to add 2-digit numbers with renaming, mentally. To be able to add 2-digit numbers with renaming, using a formal written method. To be able to estimate the answer to a calculation.</p> <p>Subtract numbers without renaming. To be fluent in recalling subtraction facts within 10.</p>	<p>To be fluent in addition facts that bridge 10. To know the place value of each digit in three-digit numbers. To be able to add and subtract numbers mentally, including a 3-digit number (hundreds, tens and ones). To be able to add numbers with up to 3 digits, using formal written methods of columnar addition with renaming. To be able to estimate the answer to a calculation.</p> <p>Subtract numbers without renaming. To be fluent in subtraction facts that bridge 10. To know the place value of each digit in</p>	<p>addition without renaming. Add numbers with renaming. To be fluent in addition facts that bridge 10.</p> <p>To know the place value of each digit in four-digit numbers. To be able to add and subtract numbers mentally, including a 4-digit number (hundreds, tens and ones).</p> <p>To be able to add numbers with up to 4 digits, using formal written methods of columnar addition with renaming. To be able to estimate the answer to a calculation.</p>	<p>Subtract numbers mentally. To be able to subtract numbers mentally with increasingly large numbers.</p> <p>Use rounding to check answers. To be able to use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.</p> <p>Solve word problems involving addition, subtraction, multiplication and division, and a combination of these. To be able to solve problems involving addition, subtraction, multiplication</p>	<p>involving the four operations. Solve problems involving addition and subtraction, multiplication and division. To be able to Solve problems involving addition, subtraction, multiplication and division.</p>
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	back on a number line.	<p>To understand the concept of subtraction.</p> <p>To understand that subtraction can be done by crossing out or taking away.</p> <p>Subtract using number bonds.</p> <p>To understand the concept of subtraction.</p> <p>To represent and use related subtraction facts within 20.</p> <p>To be able to subtract 1- and 2-digit numbers to 20, including zero.</p> <p>Subtract by counting back.</p> <p>To know how to touch count accurately.</p> <p>To be able count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.</p> <p>To know how to count a group of objects.</p>	<p>To be able to subtract 2-digit numbers without renaming, using concrete objects.</p> <p>To be able to subtract 2-digit numbers without renaming, using pictorial representations.</p> <p>To be able to subtract 2-digit numbers without renaming, mentally.</p> <p>To be able to subtract 2-digit numbers without renaming, using a formal written method.</p> <p>To be able to estimate the answer to a calculation.</p> <p>Subtract numbers with renaming.</p> <p>To recall and use subtraction facts to 20 fluently.</p> <p>To be able to subtract 2-digit numbers with renaming, using concrete objects.</p>	<p>three-digit numbers.</p> <p>To be able to subtract numbers mentally, including: a 3-digit number (hundreds, tens and ones).</p> <p>To know how to subtract numbers with up to 3 digits, using formal written methods of columnar subtraction without renaming.</p> <p>To be able to estimate the answer to a calculation.</p> <p>Subtract numbers with renaming.</p> <p>To be fluent in subtraction facts that bridge 10.</p> <p>To know the place value of each digit in three-digit numbers.</p> <p>To be able to subtract numbers mentally,</p>	<p>Subtract numbers without renaming.</p> <p>To be fluent in subtraction facts that bridge 10.</p> <p>To know the place value of each digit in four-digit numbers.</p> <p>To be able to subtract numbers mentally, including: a 4-digit number (thousands, hundreds, tens and ones).</p> <p>To know how to subtract numbers with up to 4 digits, using formal written methods of columnar subtraction without renaming.</p> <p>To be able to estimate the answer to a calculation.</p>	<p>and division and a combination of these multi-step problems in contexts, deciding which operations and methods to use and why.</p>	
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		<p>To be able to subtract by counting back. Make subtraction stories. To read, write and interpret equations containing subtraction (–) and equals (=) symbols and related expressions and equations to real-life contexts. Write subtraction equations. To understand the concept of subtraction. To be able to write a subtraction equation (for example, $6 - 3 = 3$). Make a family of addition and subtraction facts. To understand the concept of addition and subtraction. To be able to create a fact family of related addition and subtraction</p>	<p>To be able to subtract 2-digit numbers with renaming, using pictorial representations. To be able to subtract 2-digit numbers with renaming, mentally. To be able to subtract 2-digit numbers with renaming, using a formal written method. To be able to estimate the answer to a calculation.</p> <p>Add three numbers. To be able to add numbers which bridge over 10. To be able to add 3 single digit numbers using concrete objects. To be able to add 3 single digit numbers using pictorial representations.</p>	<p>including: a 3-digit number (hundreds, tens and ones). To know how to subtract numbers with up to 3 digits, using formal written methods of columnar subtraction with renaming.</p> <p>Solve word problems involving addition and subtraction. To be able to solve problems, including missing number problems, using number facts, place value and more complex addition. To be able to solve problems using number facts, place value and more complex subtraction.</p>	<p>Subtract numbers with renaming. To be fluent in subtraction facts that bridge 10.</p> <p>To know the place value of each digit in four-digit numbers.</p> <p>To be able to subtract numbers mentally, including: a 4-digit number (thousands, hundreds, tens and ones).</p> <p>To know how to subtract numbers with up to 4 digits, using formal written methods of columnar subtraction with renaming.</p> <p>Solve word problems involving</p>		
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		<p>number sentences that include the same numbers.</p> <p>Add by making 10. To read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs. To identify and represent numbers using objects and pictorial representations including the number line. To be able to make the first number total ten, then add the remainder.</p> <p>Add by adding ones. To be able to add the sum of the ones to the 10 by separating the ones and the 10.</p>	<p>To be able to add 3 single digit numbers mentally.</p> <p>Recall all number bonds to and within 10, use these to reason with and calculate bonds to and within 20. To be able to recall all the number bonds to and within 10. To be able to use knowledge of number bonds to 10 to calculate number bonds to and within 20.</p>		<p>addition and subtraction. To be able to solve problems, including missing number problems, using number facts, place value and more complex addition.</p> <p>To be able to solve problems using number facts, place value and more complex subtraction.</p>		
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		<p>Subtract by subtracting ones. To be able to subtract by subtracting from only the ones column.</p> <p>Solve word problems involving addition or subtraction. To be able to solve word problems and recognise when to use addition and subtraction through the language.</p>					
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication and Division (Whole Number)	<p>Explore that quantities up to 10 can be distributed (shared) equally.</p> <p>To recognise the numerals to 10.</p> <p>To understand the concept of sharing equally.</p> <p>To be able to count out equal groups.</p> <p>Explore double facts up to total of 10.</p> <p>To recognise the numerals to 10.</p> <p>To understand the concept of doubling.</p> <p>To know doubling facts to 10.</p>	<p>Make equal groups.</p> <p>To be able to understand how to divide numbers into equal groups using concrete materials; to be able to determine how many groups will be created from sharing equally.</p> <p>Add equal groups to find the total number of objects.</p> <p>To be able to understand how to divide even numbers into equal groups using concrete materials; to be</p>	<p>Do my 2, 5 and 10 times table.</p> <p>To be able to recall multiplication facts for the 2, 5 and 10 times tables.</p> <p>To be to recall division facts for the 2, 5 and 10 times</p> <p>Write multiplication equations.</p> <p>To understand that multiplication of two numbers can be done in any order (commutative).</p> <p>To recognise repeated</p>	<p>Do my 3, 4- and 8 times table.</p> <p>To be able to recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.</p> <p>Divide a number by 3, 4 and 8.</p> <p>To be able to recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.</p> <p>Solve word problems involving the 3, 4</p>	<p>Multiply by 6,7,9,11 and 12.</p> <p>To be able to recall and use multiplication and division facts for the 6, 7, 9, 11 and 12 multiplication tables.</p> <p>Divide by 6,7,9,11 and 12.</p> <p>To be able to recall and use multiplication and division facts for the 6, 7, 9 and 11 multiplication tables.</p> <p>Divide to find quotient and remainder.</p>	<p>Find multiples and common multiples.</p> <p>To be able to identify multiples and common multiples of a number.</p> <p>Find factors and common factors.</p> <p>To be able to identify factors, including common factors of two numbers.</p> <p>Identify prime and composite numbers.</p>	<p>Multiply numbers up to 4 digits by a 2-digit whole number.</p> <p>To be able to multiply multi-digit numbers up to 4 digits by a 2-digit whole number.</p> <p>Divide numbers up to 4 digits by a 2-digit whole number.</p> <p>To be able to divide numbers up to 4 digits by a 2-digit whole number.</p>

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		<p>able to determine how many groups will be created from sharing equally. To be able to add together equal groups. Group things equally. To be able to understand how to divide numbers into equal groups using concrete materials; to be able to determine how many groups will be created from grouping equally. Share things equally. To be able to understand how to divide even numbers equally into groups; to be able to determine how many objects will be included in each group in order to share equally. Solve word problems about multiplication.</p>	<p>addition contexts and representing them with multiplication equations.</p> <p>Divide a number by 2, 5 and 10. To be able to recall and use division facts for the 2 times tables. To be able to recall and use division facts for the 5 times tables. To be able to recall and use division facts for the 10 times tables. To be able to recall and use division facts for the 2, 5 and 10 times tables to solve problems.</p> <p>Write multiplication and division equations. To be able to recall and use multiplication and division facts for the 2, 5</p>	<p>and 8 times tables. To be able to recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. To be able to solve word problems involving the multiplication and division of 3, 4 and 8.</p> <p>Multiply 2-digit numbers. To be able to write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers. Multiply 2-digit numbers with regrouping. To be able to write and</p>	<p>To be able to solve division problems, with 2-digit dividends and 1-digit divisors, that involve remainders.</p> <p>Solve word problems involving multiplication and division. To be able to solve word problems involving multiplication and division.</p> <p>Multiply without regrouping. To be able to multiply 2-digit numbers without renaming.</p> <p>Multiply with regrouping. To be able to multiply 2-digit numbers without renaming.</p> <p>To multiply numbers using</p>	<p>To know a prime number is a number with no factors other than itself and one.</p> <p>To know 2,3,5, 7, 11,13, 17 and 19 by heart. To know a composite is divisible by a number other than one or itself.</p> <p>Children will be able to say 15 is a composite number because it is a multiple of three and five.</p> <p>Recognise square numbers and cube numbers, and use the notation for squares (eg 42) and cubes (eg 23).</p> <p>To understand the use of square numbers and cube numbers, and</p>	<p>Interpret remainders in division.</p> <p>To be able to interpret remainders as whole number remainders.</p> <p>Identify common factors, common multiples and prime numbers.</p> <p>To be able to Identify common factors, common multiples and prime numbers.</p> <p>Solve problems involving multiplication and division.</p> <p>To be able to solve word problems involving multiplication and division.</p> <p>Solve problems involving the calculation and conversion of units of measure.</p>
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		<p>To be able to solve word problems using equal groupings as the basis for multiplication.</p>	<p>and 10 times tables. To be able to write multiplication equations after exploring a pictorial representation. To be able to write division equations after exploring a pictorial representation.</p> <p>Write a family of multiplication and division facts. To be able to divide by 2 and identify the links with multiplying by 2. To be able to divide by 5 and identify the links with multiplying by 5. To be able to divide by 10 and identify the links with multiplying by 10.</p> <p>Recognise odd and even numbers.</p>	<p>calculate mathematical statements for multiplication using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers. To write formal written methods without regrouping. To write formal written methods with regrouping. Dividing with regrouping. To write and calculate mathematical statements for division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers. To be able to use formal written methods without regrouping.</p>	<p>the distributive property approach.</p> <p>Divide without regrouping. To be able to divide without regrouping. To be able to divide mentally.</p> <p>Divide with regrouping. To be able to divide with regrouping.</p>	<p>the notation for squared ² and cubed ³.</p> <p>Multiply numbers up to 4 digits by a 1-digit number.</p> <p>To be able to multiply numbers up to 4 digits by a 1- or 2-digit number using a formal written method.</p> <p>Multiply numbers up to 3 digits by a 2- digit number.</p> <p>To be able to multiply numbers up to 3 digits by a 2-digit number using a formal written method.</p> <p>Multiply and divide mentally. Multiply and divide numbers by 10, 100 and 1,000.</p> <p>To be able to</p>	<p>To be able to solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.</p>
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			<p>To be able to link whether odd or even numbers can be divisible by 2, 5 or 10. To understand and recognise odd numbers. To understand and recognise even numbers.</p> <p>Solve word problems using 2, 5 and 10 times tables. To be able to read word problems and identify what operation is required. To be able to solve word problems by using knowledge of the 2, 5 and 10 times tables.</p> <p>Solve word problems involving multiplication and division. To be able to read word problems and identify what</p>	<p>Solving multiplication and division word problems of 2-digit numbers. To be able to write and calculate mathematical statements for division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers. To be able to use formal written methods. To know how to solve problems, including missing number problems, involving multiplication and division.</p>		<p>multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 and to multiply and divide numbers mentally drawing upon known facts.</p> <p>Divide 3 digit and 4 digit numbers.</p> <p>To be able to divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context.</p> <p>Solve word problems involving addition, subtraction, multiplication and division and a combination of these.</p>	
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			<p>operation is required. To be able to solve word problems by using knowledge of the 2, 5 and 10 times tables.</p>			<p>To be able to solve problems involving addition, subtraction, multiplication and division and a combination of these multi-step problems in contexts, deciding which operations to use.</p> <p>Dividing with remainders.</p> <p>To be able to divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context.</p>	
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Length	<p>Children use everyday language to talk about size, weight, capacity and distance.</p> <p>To be able to use and say mathematical language associated with size, weight, capacity and distance.</p> <p>Ordering and comparing by weight, height, length and capacity using everyday language.</p> <p>To be able to use and say mathematical</p>		<p>How to measure length in metres (m).</p> <p>To be able to estimate length in any direction in metres using a ruler.</p> <p>To be able to measure length in any direction in metres using a ruler.</p> <p>How to measure length in centimetres (cm).</p> <p>To be able to estimate length in any direction in centimetres using a ruler.</p>	<p>Write length in metres (m) and centimetres (cm).</p> <p>To be able to use the correct unit of measurement to read and write distances in metres and centimetres.</p> <p>Convert length from m and cm to cm.</p> <p>To know the value of each unit.</p> <p>To be able to convert between different units of metric measure (for example,</p>	<p>Measure and estimate length.</p> <p>To be able to use the correct unit of measure to estimate and measure length.</p> <p>Convert units of length.</p> <p>To know the value of each unit.</p> <p>To be able to convert between different units of metric measure (for example, metre and centimetre to cm) using multiplication or division.</p>	<p>Convert measurements of length.</p> <p>To be able to convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).</p> <p>Solve problems involving measurements.</p>	<p>Calculate missing lengths using given information.</p> <p>To calculate missing lengths using information provided.</p> <p>Compare length in terms of ratio and fractions.</p> <p>To measure and compare length in terms of ratio and fractions.</p>

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	<p>language associated with size, weight, capacity and distance.</p> <p>To be able to order and compare objects using everyday objects.</p>		<p>To be able to measure length in any direction in centimetres using a ruler.</p> <p>When to use cm or m to measure length.</p> <p>To be able to correctly decide when to use cm to measure length.</p> <p>To be able to correctly decide when to use m to measure length.</p> <p>How to compare and order length.</p> <p>To be able to compare lengths using terminology such as less than, greater than, equal to and the associate symbols $>$, $<$ and $=$.</p> <p>To be able to order length using the terminology greatest and smallest.</p> <p>To order lengths and record the</p>	<p>metre and centimetre to cm) using multiplication or division.</p> <p>Convert length from cm to m and cm.</p> <p>To know the value of each unit.</p> <p>To be able to convert between different units of metric measure using multiplication or division.</p> <p>Write length in kilometres(km) and metres (m).</p> <p>To know the value of each unit.</p> <p>To be able to use the correct unit of measurement to read and write distances in kilometres and metres.</p>		<p>To be able to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</p>	
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			<p>results using $>$, $<$ and $=$.</p> <p>How to measure and draw lines. To be able to correctly use the ruler to measure lines. To be able to correctly use the ruler to draw lines.</p> <p>How to solve word problems on length. To be able to read word problems and identify which operation is required. To be able to solve word problems and use the correct unit of measure.</p> <p>Reading scales in 1,2,5 and 10. To be able to read scales which go up in 1's. To be able to read scales</p>	<p>Convert length from km and m to m. To know the value of each unit. To be able to convert between different units of metric measure using multiplication or division.</p> <p>Compare different lengths. To be able to use different units of measurement to compare and order lengths.</p> <p>Solve word problems on length. To choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit. To be able to read word</p>			
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			<p>which go up in 2's. To be able to read scales which go up in 5's. To be able to read scales which go up in 10's.</p>	<p>problems and identify which operation is required. To be able to solve word problems and use the correct unit of measure.</p>			
Area and Perimeter				<p>Measure the total length around a shape. To be able to use a ruler accurately to measure the total length of a shape.</p> <p>Find the perimeter of figures using a square grid.</p> <p>To understand the term 'perimeter.' To be able to count accurately squares around a shape. To count the squares of each side and add them all up.</p>	<p>Measure perimeter in different units. To measure and calculate the perimeter of shapes in centimetres and metres.</p>	<p>Find the perimeter of a figure. To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.</p> <p>Find the area of a figure. To calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the</p>	<p>Find the perimeter and the area of rectangles and parallelograms.</p> <p>To be able to calculate the area of parallelograms and rectangles</p> <p>Use formulae to find the area of rectangles, triangles and parallelograms.</p> <p>To be able to recognise when it is possible to use formulae for area of shapes.</p> <p>Use the area of rectangles to find the area of other types of polygons</p>

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				<p>Find the perimeter of figures in centimetres (cm) and metres (m). To understand the term 'perimeter.' To be able to use the correct unit of measurement to read and write distances in metres and centimetres. To be able to calculate all the lengths together. Find the perimeter of squares and rectangles. To understand the term 'perimeter.' To be able to use the correct unit of measurement. To be able to calculate all the lengths together.</p>		<p>area of irregular shapes.</p> <p>Use scale diagrams to find the perimeter and the area of a figure. To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.</p> <p>Estimate the area of a figure.</p> <p>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.</p>	<p>and composite shapes.</p> <p>To be able to use formulae for the area and perimeter of rectangles and to recognise that shapes with the same areas can have different perimeters and vice versa.</p>
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Volume	Capacity- full, empty, half full. To be able to know and use the language of capacity: full, empty and half full. To be able to recognise a	Compare volume and capacity. To be able to compare volume and capacity using the terms 'more than' and 'less than', 'full' and 'empty.'	Compare volume. To be able to compare volume using terminology greater than, less than and equal to.	Measure volume in millilitres (ml) and litres (l). To understand the term 'volume.' To understand the value of a millilitre and litre.	Measure and estimate volume. Convert units of volume. To understand the term 'volume.' To understand the value of a millilitre and litre.	Find and compare the volumes of solids. To identify 3-D shapes, including cubes and other cuboids, from 2-	Find the volume of solids by counting unit cubes. To be able to find the volume of cubes and cuboids.

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	<p>container that is empty etc.</p>	<p>Use half and a quarter to describe volume.</p> <p>Find volume and capacity. To know how to measure and begin to record the following: capacity and volume. To be able to compare, describe and solve practical problems for: capacity and volume [for example, full/empty, more than, less than, half, half full, quarter].</p>	<p>To use the associate symbols to compare volume $>$, $<$ and $=$.</p> <p>Measure volume in litres (l) and millilitres (ml). To be able to correctly measure volume in litres. To be able to correctly measure volume in millilitres. To understand that millilitres is a smaller unit of measure.</p> <p>Solve word problems on volume. To be able to read word problems and identify which operation is required. To be able to solve word problems and use the correct unit of measure and operation.</p>	<p>To be able to read a scale.</p> <p>Measure capacity in ml and l. To understand the term 'capacity.' To understand the value of a millilitre and litre. To be able to read a scale.</p> <p>Write volume in ml and l. To understand the term 'volume.' To be able to accurately write answers in ml and l.</p> <p>Write capacity in ml and l. To understand the term 'capacity.' To be able to accurately write answers in ml and l.</p> <p>Solve word problems on volume and capacity.</p>	<p>To be able to read a scale.</p>	<p>D representations.</p> <p>Find and compare the capacity of rectangular boxes.</p> <p>To estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]. Use all four operations to solve problems involving measure [for example, length, mass, volume, money].</p> <p>Estimate volume and capacity.</p> <p>To estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and</p>	<p>Calculate the volume of cubes and cuboids in standard units.</p> <p>To be able to find the volume of cubes and cuboids using standard units.</p> <p>Solve problems involving volume.</p> <p>To be able to solve problems involving the volume of solids.</p>
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				<p>To be able to read word problems and identify which operation is required.</p> <p>To be able to solve word problems and use the correct unit of measure and operation.</p>		<p>capacity [for example, using water]. Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.</p> <p>Convert units of volume.</p> <p>Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).</p> <p>Solve word problems involving volume.</p> <p>To use all four operations to solve problems involving measure [for example, length,</p>	
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						mass, volume, money].	
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry	Children use everyday language to talk about size position. To be able to know and use everyday language to talk about size position. Recognise, create and describe	Name solids and shapes. To recognise and be able to name 3D and 2D shapes. Look for shapes in solids. To be able to find 2D shapes in 3D shapes. Group shapes. To know the properties of "D	Name triangles, quadrilaterals and polygons. To recognise and name 2D shapes. To understand what a polygon is. Identify the number of sides and vertices of a shape.	Recognise an angle. To recognise angles as a property of shape or a description of a turn. Find angles in shapes. To recognise angles as a	Identify acute and obtuse angles. To recognise angles as a property of shape or a description of a turn. To be able to identify right, acute and obtuse angles.	Identify acute angles, right angles, obtuse angles and reflex angles. To estimate and compare acute, obtuse and reflex angles. Draw and measure given angles.	Recognise angles that meet at a point, angles on a straight line and vertically opposite angles. To be able to recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and

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<p>patterns with common shapes. To know what a pattern is and to know how to create one. To be able to identify and describe common shapes. To be able to describe patterns with common shapes in them. Everyday positional language. To be able to know and use positional language (behind, in front, next to). Recognise, Talk about and explore 2D and 3D shapes using informal mathematical language 'sides' 'corners' 'straight' 'flat' 'round.' To recognise basic 2D and 3D shapes. To describe 2D and 3D shapes</p>	<p>and 3D shapes. To be able to group shapes using different criteria. Make and complete patterns with shapes. To be able to recognise and name common 2-D shapes, for example rectangles (including squares), circles and triangles. To be able to follow and complete patterns with shapes.</p>	<p>To identify and describe the properties of 2-D shapes, including the number of sides, vertices and lines of symmetry. To identify and describe the properties of 3-D shapes, including the number of edges, vertices and lines of symmetry. Identify the lines of symmetry of a shape or figure. To be able to correctly identify the lines of a symmetry of a shape or figure. Sort shapes. To be able to sort 2D shapes based on their properties.</p>	<p>property of shape. Find a right angle, an acute angle and an obtuse angle. To recognise angles as a property of shape or a description of a turn. To be able to identify right, acute and obtuse angles. Compare the sizes of angles. To be able to identify whether angles are greater than or less than a right angle. To know the criteria of an acute and obtuse angles. Make a half turn, a three-quarters turn and a full turn. To be able to identify right angles,</p>	<p>Compare and order angles. To be able to identify whether angles are greater than or less than a right angle. To know the criteria of an acute and obtuse angles. Compare and classify triangles and quadrilaterals. To be able to compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify lines of symmetry in 2-D shapes. To be able to identify lines of symmetry in 2-D shapes, when</p>	<p>To draw given angles and measure them in degrees (°). Identify angles on a straight line and angles that meet at a point. To identify angles at a point on a straight line and 1/2 a turn (total 180°). Find unknown angles in squares and rectangles. To use the properties of rectangles to deduce related facts and find missing lengths and angles. Identify regular polygons. To distinguish between regular and irregular polygons based on reasoning</p>	<p>find missing angles. Find unknown angles in triangles, quadrilaterals and regular polygons. To be able to identify unknown angles in any triangles, quadrilaterals, and regular polygons. Identify the radius, diameter, circumference and centre of a circle. To be able to illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Draw 2D shapes using given</p>
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	using informal mathematical language.		<p>Draw figures on a square grid and a dot grid. To be able to draw basic shapes on a grid.</p> <p>Make and complete patterns. To be able to recognise repeated patterns by shape, size or colour. To compare and sort common 2-D and 3-D shapes and everyday objects. To be able to order and arrange combinations of mathematical objects in patterns and sequences.</p> <p>Move shapes. To be able to describe direction and movement using</p>	<p>recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn. To be able to make a half turn, three quarter turn and full turn. Identify perpendicular lines. To understand a perpendicular is a straight line that makes an angle of 90° with another line. To be able to identify pairs of perpendicular lines.</p> <p>Identify parallel lines. To understand parallel lines are always the same distance apart (called "equidistant") and will never meet. To recognise and identify parallel lines.</p>	<p>also presented in different orientations.</p> <p>Complete a simple symmetrical figure with respect to a specific line of symmetry. To be able to complete a simple symmetric figure with respect to a specific line of symmetry.</p>	<p>about equal sides and angles.</p> <p>Identify 3-D shapes from 2-D drawings.</p> <p>To identify 3D shapes when shown nets/2D representations.</p>	<p>dimensions and angles.</p> <p>To be able to draw 2D shapes using given dimensions and angles.</p> <p>Identify and draw nets of 3D shapes.</p> <p>To be able to recognise and make nets for 3-D shapes.</p>
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			<p>vocabulary, such as 'left', 'right', 'up' and 'down'</p> <p>Turn shapes. To be able to describe rotation using vocabulary, such as 'quarter turn', 'half turn' and 'three-quarter turn'. To be able to describe direction using vocabulary, such as 'clockwise' and 'anti-clockwise'. To be able to identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn.</p> <p>Recognise flat faces and curved surfaces. To recognise 3D shapes, have flat</p>	<p>Draw and describe 2D shapes. To recognise, name and be able to describe the properties of 2D shapes. To be able to draw 2D shapes accurately in different orientations and describe them.</p> <p>Make and describe 3D shapes. To recognise, name and be able to describe the properties of 3D shapes. To be able to make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.</p>			
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			<p>faces and curved surfaces. To identify 2-D shapes on the surface of 3-D shapes.</p> <p>Name and describe spheres, cuboids, cubes cylinders, cones, pyramids and prisms. To identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. To identify 2-D shapes on the surface of 3-D shapes.</p> <p>Identify the number of faces, edges and vertices of a shape. To identify and describe the properties of 3-D shapes,</p>				
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			<p>including the number of edges, vertices and faces.</p> <p>Fold two-dimensional shapes into three dimensional ones.</p> <p>To be able to use the nets of 3D shapes to fold and make it into a three-dimensional shape.</p> <p>Group shapes in different ways.</p> <p>To be able to group 3-D shapes by similar properties.</p> <p>Form structures with shapes.</p> <p>To be able to form 3-D structures using multiple 3-D shapes.</p>				
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			<p>To draw 2-D shapes and make 3-D shapes using modelling materials.</p> <p>To recognise 3-D shapes in different orientations and describe them.</p> <p>To identify 2-D shapes on the surface of 3-D shapes.</p> <p>Make patterns with shapes.</p> <p>To be able to make and recognise patterns using 3-D shapes.</p> <p>To be able to order and arrange combinations of mathematical objects in patterns and sequences.</p> <p>Describe similarities and differences of a 2D and 3D shapes.</p>				
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			To be able to describe the similarities and differences of the properties of 2D and 3D shapes.				
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mass		Compare the mass of objects. To understand the term mass. To be able to compare the mass of objects	Measure mass in kilograms (kg). To understand that kilograms is standard unit for measuring mass.	Read the scales for mass in kilograms (kg) and grams (g). To understand that grams and kilograms are a	Measure and estimate mass. To be able to estimate mass to the nearest kilogram.	Convert measurement of mass. To convert between different units of	Ratio to compare mass. To be able to use ratio to compare two

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		<p>using the terms 'heavy' and 'light', 'heavier than', 'lighter than' and 'as heavy as'.</p> <p>Find the mass of objects.</p> <p>To be able to find the mass of an object using non-standard units; to be able to use visualisation skills to estimate the number of units.</p>	<p>To be able to measure mass in kilograms.</p> <p>Measure mass in grams (g).</p> <p>To understand that grams is standard unit for measuring mass.</p> <p>To be able to measure mass in grams.</p> <p>Compare and order mass.</p> <p>To be able to compare the mass of two different objects accurately.</p> <p>To be able to compare and order mass and record the results using the less than, greater than and equals to symbols ($>$, $<$ and $=$).</p> <p>Solve word problems on mass.</p> <p>To be able to measure, compare, add</p>	<p>standard unit for measuring mass.</p> <p>To be able to read a range of scales whilst measuring mass.</p> <p>Solve word problems on mass.</p> <p>To be able to measure, compare, add and subtract mass (kg/g).</p> <p>To be able solve problems involving mass.</p>		<p>metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</p> <p>Solve problems involving measurements.</p> <p>To use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.</p>	<p>quantities, including mass.</p>
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			and subtract mass (kg/g). To be able solve problems involving mass.				
Temperature			Read a thermometer. To be able to accurately read temperature in Celsius. Measure and write down the temperature. To be able to choose and use appropriate standard units to estimate and measure temperature (°C) to the nearest appropriate unit, using thermometers.			Tell the temperature. To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.	Negative numbers To be able to use negative numbers in context and calculate intervals across zero.
Money	Children use everyday language to talk about money. To be able to recognise and name some English currency. To be able to talk about English currency	Recognise coins. To recognise and be able to name all English coins. Recognise notes. To recognise and be able to name all English notes.	Name coins and notes. To recognise and be able to name all English currency. Count an amount of money. To be able to count money in	Name the amount of money in pounds and pence. To recognise and be able to name all English currency. Use different ways to show			Solve problems involving money, including the use of percentages, change, increase and decrease. To be able to use equivalences between simple fractions,

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	using everyday language.		<p>notes and use the symbol for pounds. To be able to count money in pennies and the use the symbol for pennies.</p> <p>Show amounts of money in different ways. To recognise and be able to name all English currency. To be able to calculate the same amount of money using different notes and coins.</p> <p>Exchange coins and notes. To be able to exchange a coin with other coins of different denominations.</p> <p>To be able to find different combinations of coins that equal the same amounts of money.</p>	<p>the same amount of money. To recognise and be able to name all English currency. To be able to calculate the same amount of money using different notes and coins. Add money in pounds and pence. To recognise and be able to name all English currency. To be able to add money in pounds and pence.</p> <p>Subtract money in pounds and pence. To recognise and be able to name all English currency. To be able to subtract money in pounds and pence.</p>			decimals and percentages in different contexts.
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			<p>Compare amounts of money. To be able to compare different amounts of money.</p> <p>Calculate change. Solve word problems on money. To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.</p>	<p>Calculate change in pounds and pence. To recognise and be able to name all English currency.</p> <p>Solve word problems on money. To recognise and be able to name all English currency. To be able to add and subtract money including calculating change.</p>			
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Time	<p>Children use everyday language to talk about time, such as today, yesterday, tomorrow, this morning, evening, night, afternoon, earlier, later.</p> <p>To be able to use everyday language to talk about time, such as today, yesterday, tomorrow, this morning, evening, night,</p>	<p>Tell time to the hour.</p> <p>To recognise the numerals 1 to 12.</p> <p>To be familiar with the analogue clock, including the minute and hour hands.</p> <p>To be able to tell time to the hour on an analogue clock.</p> <p>Tell time to the half hour.</p>	<p>Tell and write the time to 15 minutes.</p> <p>To be able to tell the time to the nearest 15 minutes using vocabulary 'quarter past, half past, quarter to, o' clock'.</p> <p>To know the number of minutes in an hour and the number of hours in a day.</p>	<p>Tell and write time in am and pm.</p> <p>To be able to tell the time using an analogue clock.</p> <p>To understand time in the 12-hour format.</p> <p>To know when am and pm begins and ends.</p> <p>Tell and write time using "past" and "to".</p> <p>To be able to tell the time using an analogue time.</p>	<p>Tell time using the 24-hour clock.</p> <p>To be able to read time with increasing accuracy to the nearest minute.</p> <p>To be able to tell the time using vocabulary such as o'clock, a.m./p.m. morning, afternoon, noon and midnight.</p> <p>To be able to read, write and convert time</p>	<p>Convert measurements of time.</p> <p>To be able to convert units of time.</p> <p>Solve problems involving measurements.</p> <p>To solve problems involving converting between units of time.</p>	<p>Interpret timetables.</p> <p>To be able to read and interpret timetables.</p>

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	<p>afternoon, earlier, later. To understand different times of the day e.g. when morning is.</p>	<p>To recognise the numerals 1 to 12. To be familiar with the analogue clock, including the minute and hour hands. To be able to tell time to the hour on an analogue clock. To know if the longhand is halfway around the clock, it is half past the hour. To be able to tell time to the half hour using the term 'half past'. Compare different times. To recognise the numerals 1 to 12. To be familiar with the analogue clock, including the minute and hour hands. To be able to compare different times e.g., 9 am to 9 pm.</p>	<p>Draw hands on a clock face to show time. To be able to draw hands on an analogue clock to show the correct time.</p> <p>Find the duration of time. To be able to find the end time given the start time and the duration in 30-minute and hourly intervals.</p> <p>Find the ending or starting time. To be able to find the start time, given the end time and the duration in 30-minute and hourly intervals.</p> <p>Compare and sequence intervals of time. To be able to compare and sequence intervals of time.</p>	<p>To understand when to use 'to' when telling the time ("It's twenty to eleven"). To understand past is before half past (minutes 1 – 29, we say it's past (or after) the hour).</p> <p>Tell and write time shown on different types of clocks. To be able to tell the time using an analogue clock, digital or 24-hour clock.</p> <p>Measure time in seconds, hours and minutes. To know there are 60 seconds in minute. To know there are 60 minutes in an hour. To know there are 24-hours in a day. To be able to measure time switching from different units.</p>	<p>between analogue and digital 12-hour and 24-hour clocks.</p> <p>Change time in minutes to seconds. To know there are 60 seconds in one minute. To be able to convert minutes into seconds.</p> <p>Change time in hours to minutes. To know there are 60 minutes in one hour. To be able to convert hours into minutes.</p> <p>Change time in years to months. To know the number of days in each month, year and leap year. To be able to convert years to months and weeks to days.</p>		
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		<p>Recognise dates on a calendar. To be able to recognise and use language relating to dates, including days of the week, weeks, months and years.</p>	<p>Know the number of minutes in an hour. To know there are 60 seconds in minute. To know there are 60 minutes in an hour.</p> <p>Know the number of hours in a day. To know there are 24-hours in a day.</p>	<p>Find starting time, ending time and duration. To be able to tell the time using an analogue, digital and analogue time. To be able measure durations of time from the starting point and from the ending point. Find the number of days using a calendar. To know how many days there are in a week and every month. To be able to calculate numbers of days using a calendar. Know the number of days in each month, year and leap year. To know how many days there are in a week, every month, year and leap year.</p>	<p>Find the duration, starting time and finishing time. To be able to tell the time using an analogue, digital and analogue time. To be able measure durations of time from the starting point and from the ending point.</p> <p>Solve word problems on time. To be able to solve word problems involving duration of time.</p>		
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Graphs			<p>Read information from pictograms, block diagrams, tally charts and tables.</p> <p>To be able to read and interpret a picture graph.</p> <p>Make pictograms, block diagrams, tally charts and tables.</p> <p>To be able to construct simple pictograms and tally charts.</p> <p>Solve problems using information from pictograms, block diagrams, tally charts and tables.</p> <p>To be able to solve problems using information from pictograms, block diagrams,</p>	<p>Draw picture graphs and bar graphs.</p> <p>To understand scales of different values.</p> <p>To know how to Interpret and present data using bar charts, pictograms and tables.</p> <p>Read and interpret bar graphs.</p> <p>To understand scales of different values.</p> <p>To know how to Interpret data using bar graphs.</p> <p>Solve problems using information from bar graphs.</p> <p>To understand scales of different values.</p> <p>To know how to Interpret data</p>	<p>Use a table to show information.</p> <p>To be able to draw a table to present information.</p> <p>Draw, read and interpret tables, picture graphs, bar graphs and line graphs.</p> <p>To understand scales of different values.</p> <p>To know how to Interpret and present data using bar graphs, picture graphs and line graphs.</p> <p>To understand scales of different values.</p> <p>To know how to interpret data using bar graphs.</p>	<p>Read and interpret information in a timetable.</p> <p>To read and interpret information in tables, including timetables.</p> <p>Read, interpret and complete information in a table.</p> <p>To complete, read and interpret information in tables, including timetables.</p> <p>Read and interpret information from a line graph.</p> <p>To solve comparison, sum and difference problems using</p>	<p>Calculate and interpret the mean as an average.</p> <p>To be able to calculate and interpret the mean as an average.</p> <p>Draw and read pie charts.</p> <p>To be able to interpret and construct pie charts.</p> <p>Draw and read graphs.</p> <p>To be able to interpret and construct line graphs</p> <p>Solve problems using information provided by graphs.</p>

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			tally charts and tables.	using bar graphs. To be able to answer questions and solve problems using information from a bar graph.	Solve problems using information from tables and graphs. To understand scales of different values. To know how to interpret data. To be able to answer questions and solve problems using information from tables and graphs.	information presented in a line graph. Solve word problems using information from a line graph. To solve comparison, sum and difference problems using information presented in a line graph.	To be able to interpret and construct line graphs and use these to solve problems. Median, mode and range including line graphs. To be able to calculate and interpret the median, mode and range including line graphs.
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Position and Movement	<p>Children use everyday language to talk about position, first, second, third, after, next, before, in front of, behind, next to, under, on top.</p> <p>To understand and be able to use ordinal number language.</p> <p>To be able to know and use every day positional language.</p>	<p>Name positions in a race and in a queue.</p> <p>To be able to use the appropriate positional language (ordinal numbers) for up to 10 positions.</p> <p>Name positions from the left and from the right.</p> <p>To be able to name positions, including left and right, with respect to a reference point.</p> <p>Use words such as before, after, next to, last and between to name positions.</p> <p>To be able to recognise the numerals and count to 100.</p> <p>To understand the language before, next etc.</p> <p>To be able to use the comparative language in</p>			<p>Describe positions using coordinates.</p> <p>To be able to describe positions on a 2-D grid as coordinates.</p> <p>To be able to describe movements between positions as translations of a given unit to the left/right and up/down.</p> <p>Plot points and form figures on the grid.</p> <p>To be able to plot specified points and draw sides to complete a given polygon.</p>	<p>Write the coordinates of points.</p> <p>To be able to write, name and plot points.</p> <p>Describes translations and reflections.</p> <p>To describe the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.</p> <p>Find the position of a shape after translation or after reflection.</p> <p>To find the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.</p>	<p>Use coordinate grids with negative numbers.</p> <p>To be able to describe positions on the full coordinate grid (all four quadrants).</p> <p>Describe positions of points with coordinates.</p> <p>To be able to describe positions on the full coordinate grid.</p> <p>Draw, translate and reflect simple shapes on the coordinate plan. 4 quadrants.</p> <p>To be able to draw, translate and reflect simple shapes on the coordinate plane.</p>

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		<p>relation to numbers to 100.</p> <p>Describe positions. To be able to describe position, direction and movement, including whole, half, quarter and three-quarter turns.</p> <p>Describe movements. To be able to describe position, direction and movement, including whole, half, quarter and three-quarter turns.</p> <p>Describe turns. To understand how to make turns using mathematical language. To be able to describe position, direction and movement, including whole, half, quarter and</p>					
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		three-quarter turns.					
Ratio							<p>Compare quantities and numbers using ratios.</p> <p>To be able to use ratio to compare two quantities.</p> <p>Solve problems involving ratios.</p> <p>To be able to solve problems involving ratio.</p>

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Negative Numbers							<p>Add and subtract negative numbers.</p> <p>To be able to add and subtract negative numbers.</p> <p>Use negative numbers in</p>

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							<p>context in temperature.</p> <p>To be able to use negative numbers in context and calculate intervals across zero.</p> <p>Solve negative numbers</p> <p>To be able to solve number and practical problems that involve negative numbers.</p>
Algebra							<p>Describe and complete a pattern.</p> <p>To be able to generate and describe number patterns.</p> <p>Write and evaluate algebraic expressions.</p> <p>To be able to write and evaluate</p>

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							<p>algebraic expressions.</p> <p>Write and use formulae.</p> <p>To be able to write and use simple formulae.</p> <p>Solve equations and converting back again.</p> <p>To be able to use knowledge of algebra to solve problems.</p>
Roman Numerals					<p>Read and write Roman numerals for 1 to 20.</p> <p>To read and write Roman numerals to 20.</p> <p>Read and write Roman numerals to 100.</p> <p>To read and write Roman numerals to 100 (I to C).</p>	<p>Write Roman numerals up to 1,000.</p> <p>To be able to write Roman numerals to 1000 (M).</p> <p>Write years in Roman numerals.</p> <p>To write and recognise years written in Roman numerals.</p>	

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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions	<p>Explore sharing with quantities to 10. To understand the concept of sharing. To be able to share numbers to 10.</p> <p>Explore double facts up to 10. (5+5) To understand the concept of doubling. To be able to double numbers up to 10.</p>	<p>Show a half. To know how to split an object (shape) into two equal parts; to be able to identify shapes that have been split into two equal parts.</p> <p>Show a quarter. To be able to split an object (shape) into four equal parts; Find a half or a quarter of a groups of things. To know how to group/share things to get a half or a quarter.</p>	<p>Make and show halves, quarters and thirds. To be able to recognise, find, name and write $\frac{1}{2}$ and $\frac{1}{4}$. To recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.</p> <p>To be able to recognise, find, name and write thirds.</p> <p>Name and write a fraction. To be able to identify, name and write a fraction after exploring a pictorial representation.</p> <p>Name fractions that make one whole. To explore the fraction wall. To be able to recognise and</p>	<p>Count in tenths. To be able to count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10. Make number pairs that form one whole. To add and subtract fractions with the same denominator that make 1 whole (for example, $\frac{5}{7} + \frac{2}{7} = 1$). To recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Add and subtract two fractions. To be able to add and subtract fractions with the same</p>	<p>Count in hundredths. To be able to count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and by dividing tenths by 10.</p> <p>Write and show mixed numbers on a number line. To be able to write mixed numbers. To be able to show mixed numbers on a number line.</p> <p>Find equivalent fractions. To find equivalent fractions.</p> <p>To recognise and show families of common equivalent</p>	<p>Find equivalent fractions of a given fraction.</p> <p>To identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</p> <p>Recognise mixed numbers and improper fractions and convert from one form to the other.</p> <p>To recognise mixed numbers and improper fractions and convert from one form to the other.</p> <p>Compare and order fractions.</p> <p>To compare and order fractions whose denominators are all multiples of the same number.</p>	<p>Find equivalent fractions using common multiples.</p> <p>To be able to use common multiples to express fractions in the same denomination.</p> <p>Simplify fractions using common factors.</p> <p>To be able to use common factors to simplify fractions.</p> <p>Compare and order fractions.</p> <p>To be able to compare and order fractions.</p> <p>Add and subtract fractions.</p> <p>To be able to add and subtract fractions</p>

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			<p>name fractions that make one whole. Compare and order fractions. To be able to compare and order fractions with the same denominator.</p> <p>Count wholes with halves, quarters and thirds. To be able to recognise and write mixed numbers.</p> <p>Find part of a set and a quantity. To be able to find a fraction of a set. To recognise, find and write fractions of a set of objects.</p>	<p>denominator within 1 whole (for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$). To be able to recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</p> <p>Find and list equivalent fractions. To be able to recognise and show, using diagrams, equivalent fractions with small denominators. To recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</p>	<p>fractions using diagrams.</p> <p>Simplify fractions and mixed numbers. To be able to simplify mixed numbers.</p> <p>Add and subtract fractions. To add and subtract fractions with the same denominator.</p> <p>Solve word problems involving fractions. To recognise, find and write fractions of a discrete set of objects.</p> <p>To solve problems involving fractions.</p>	<p>Add and subtract fractions.</p> <p>To add and subtract fractions with the same denominator and denominators that are multiples of the same number.</p> <p>Multiply proper fractions and mixed numbers by whole numbers.</p> <p>To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.</p> <p>Divide fractions (Not MNP)</p> <p>To recognise mixed numbers and improper fractions and convert from one form to the other.</p>	<p>Multiply proper fractions.</p> <p>To be able to multiply simple pairs of proper fractions.</p> <p>Divide proper fractions by whole numbers.</p> <p>To be able to divide proper fractions by whole numbers (for example, $\frac{1}{3} \div 2 = \frac{1}{6}$).</p> <p>Relate division of whole numbers to fractions and decimals.</p> <p>To be able to associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.</p> <p>Find fractions of an amount</p>
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				<p>Write a fraction in its simplest form.</p> <p>To recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</p> <p>To recognise and know equivalent fractions.</p> <p>To be able to write fractions in their simplest form using knowledge of equivalent fractions.</p> <p>Compare fractions.</p> <p>To recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</p> <p>To be able to compare</p>		<p>Making number pairs.</p> <p>To add and subtract fractions with the same denominator and denominators that are multiples of the same number.</p>	<p>To be able to find fractions of whole numbers.</p>
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				<p>different fractions.</p> <p>Find part of a set and fraction of a number.</p> <p>To recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</p> <p>To be able to use objects or division to find part of a set or finding fractions of whole numbers.</p> <p>Share a number equally.</p> <p>To understand that equal means the same number or quantity.</p> <p>To be able to use objects or division to share a number equally.</p>			
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				<p>Write fractions on the number line.</p> <p>To be able to recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</p> <p>Write fractions that are greater than 1.</p> <p>To recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</p> <p>To understand a fraction is part of 1.</p> <p>To know a fraction more than one is a mixed number (improper fraction).</p>			
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				<p>To be able to record fractions that are greater than 1.</p> <p>Solve word problems involving fractions.</p> <p>To recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</p> <p>To solve problems involving fractions.</p>			
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Decimals					<p>Recognise and write tenths. To be able to recognise and write decimal equivalents of any number of tenths.</p> <p>Recognise and write hundredths. To be able to recognise and write decimal equivalents of any number of hundredths.</p>	<p>Read and write decimals up to three decimal places.</p> <p>To read and write numbers with up to three decimal places.</p> <p>Compare and order decimals up to three decimal places.</p> <p>To compare and order numbers</p>	<p>Relate division of whole numbers to fractions and decimals.</p> <p>To be able to associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.</p> <p>Write fractions and decimals.</p>

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					<p>Compare numbers with the same number of decimal places. To be able to compare and order numbers with the same number of decimal places up to 2 decimal places.</p> <p>Round decimals with one decimal place to the nearest whole number. To be able to round numbers with 1 decimal place to the nearest whole number.</p> <p>Recognise and write decimal equivalents of $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$. To be able to recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.</p> <p>Divide a 1 or 2 digit number by 10 and by 100.</p>	<p>with up to three decimal places.</p> <p>Write fractions as decimals.</p> <p>To write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$].</p> <p>Add and subtract decimals.</p> <p>To be able to add and subtract amounts in decimals.</p> <p>Round decimals with two decimal places to the nearest whole number and to one decimal place.</p> <p>To round decimals with two decimal places to the nearest whole number and to one decimal place.</p>	<p>To be able to associate and write a fraction with division and calculate decimal fraction equivalents for a simple fraction.</p> <p>Tell the place value of digits in a decimal number.</p> <p>To be able to identify the place value of digits in a decimal number.</p> <p>Multiply and divide decimals with 1 digit and 2-digit whole numbers.</p> <p>To be able to multiply 1-digit numbers with up to two decimal places by 2-digit whole numbers.</p>
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					<p>To be able to divide 1- or 2-digit numbers by 10.</p> <p>To be able to divide 1- or 2-digit numbers by 100.</p> <p>Solve simple measure and money problems involving decimals.</p> <p>To be able to solve measure and money word problems and write the final answer as a decimal.</p>	<p>Solve problems involving decimals up to three decimal places.</p> <p>To solve problems involving numbers up to three decimal places.</p>	
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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Percentage						<p>Recognise the percent symbol (%)</p> <p>To recognise the per cent symbol (%) and understand that per cent relates to 'number of</p>	<p>Calculate the percentage of a number and a quantity.</p> <p>To be able to calculate percentages of a whole number and a quantity.</p>

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						<p>parts per hundred.'</p> <p>Find percentage of a given number.</p> <p>To be able to convert values of an amount into percentages.</p> <p>Interpret a percentage as a fraction of an amount.</p> <p>To understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.</p>	<p>Use percentage to describe changes.</p> <p>To be able solve problems involving a change in percentage.</p> <p>Use percentage to compare.</p> <p>To solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison.</p>
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