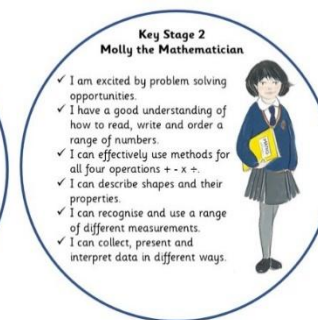
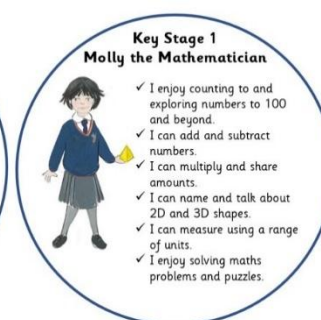
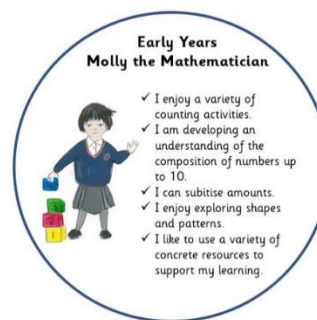


Curriculum Progression Ladder

Mathematics



Place Value - Counting

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
- Sing number rhymes and songs - Count to 20 forwards and backwards - Count sets of objects to 20	- Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number - Count, read and write numbers to 100 in numerals - count in multiples of twos, fives and tens	Count in 2, 3, and 5 from 0, and in tens from any number, forward, backward	- Count from 0 in multiples of 4, 8, 50 and 100; - Find 10 or 100 more or less than a given number	- Count in multiples of 6, 7, 9, 25 and 1000 - Count backwards through zero to include negative numbers	- Count forwards or backwards in steps of 10 for any given number up to 1 million - count forwards and backwards with positive and negative whole numbers, including through zero	
Number, Zero, one, two, three to twenty, None Count Before, after More, less, least, greater, ones tens, numeral	number numeral zero one, two, three ... twenty teens numbers, eleven, twelve ... twenty twenty-one, twenty-two ... one hundred none how many ...? count, count (up) to, count on (from, to), count back (from, to) forwards backwards count in ones, twos, fives, tens	Tens, Units/ones, Digit, numeral, Hundreds, Partition, Recombine, more/less, compare,	count, count (up) to, count on (from, to), count back (from, to) forwards backwards count in ones, twos, fives, tens, threes, fours, eights, fifties and so on to hundreds equal to equivalent to is the same as more, less most, least			

Place Value – Representing

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
- Count sets of objects to 10 with accurate 1:1 correspondence - Make marks to represent numbers and quantities - Read and write numbers from 1-20	- Identify and represent numbers using objects and pictorial representation - Read and write numbers from 1 to 20 in numerals and words.	- Read and write numbers to at least 100 in numerals and in words - Identify, represent and estimate numbers using different representations including the number line	- Identify, represent and estimate numbers using different representations - Read and write numbers up to 1000 in numerals and in words	- Identify, represent and estimate numbers using different representations - Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value	- Read, write (order and compare) number to at least 1 million and determine the value of each digit - Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	Read, write, order and compare numbers up to 10 million and determine the value of each digit

zero, number, one, two, three ... to twenty and beyond teens numbers, eleven, twelve ... twenty none how many ...? count, count (up) to, count on (from, to), count back (from, to) count in ones, twos, fives, tens is the same as more, less odd, even few pattern pair		number names and digits to 100	ones tens, hundreds digit one-, two- or three-digit number place, place value stands for, represents			Increase, decrease, equal to, rounding, nearest, negative number, compare, order, partitioning, place value, part, part whole, ones, tens, hundreds, thousands, ten thousands, hundred thousands, millions, ten millions
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Place Value – Using Place Value and Comparing Numbers

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	- Given a number, identify one more and one less - Order groups of numbers according to size	- Recognise the place value of each digit in a two-digit number (tens, ones) - Compare and order numbers from 0 up to 100; - use <, > and = signs to compare numbers to 100	- Recognise the place value of each digit in a three-digit number (hundred, tens, ones) - Compare and order numbers up to 1000, - use <, > and = signs to compare numbers to 1000	- Find 1000 more or less than a given number - Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) - Order and compare numbers beyond 1000, - use <, > and = signs to compare numbers to 10,000	Read, write, order and compare numbers to at least 1 million and determine the value of each digit	- Read, write, order and compare numbers up to 10 million - Recognise the value of each digit in numbers up to 10 million - Compose and decompose numbers up to 10 million using standard and non-standard partitioning
ones, tens, digit, the same number as, as many as more, larger, bigger, greater fewer, smaller, less fewest, smallest, least most, biggest, largest, greatest	equal to equivalent to is the same as more, less most, least many odd, even multiple of few pattern pair ones tens digit the same number as, as many as more, larger, bigger, greater fewer, smaller, less fewest, smallest, least most, biggest, largest, greatest one more, ten more one less, ten less equal to one more, ten more one less, ten less compare order size first, second, third... twentieth last, last but one before, after next between above, below	equal to equivalent to is the same as more, less most, least many odd, even multiple of few pattern pair first, second, third... twentieth last, last but one before, after next between half-way between above, below	odd, even multiple of, factor of sequence continue predict few pattern pair, rule relationship > greater than < less than the same number as, as many as more, larger, bigger, greater fewer, smaller, less fewest, smallest, least most, biggest, largest, greatest one more, ten more, one hundred more one less, ten less, one hundred less equal to compare order			Increase, decrease, equal to, rounding, nearest, negative number, compare, order, partitioning, place value, part, part whole, ones, tens, hundreds, thousands, ten thousands, hundred thousands, millions, ten millions

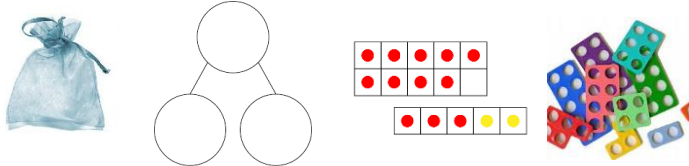
Place Value – Problems and Rounding

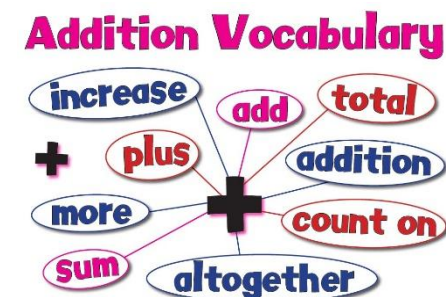
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Use place value and number facts to solve problems.	Solve number problems and practical problems involving these ideas	Solve number problems and practical problems involving these ideas	- Round any number to the nearest 10, 100 or 1000 - Solve number and practical problems that involve all of the above and with increasingly large positive numbers	- Interpret negative numbers in context - Round any number up to 1 million to the nearest 10, 100, 1000, 10 000 and 100 000 - Solve number problems and practical problems that involve all of the above	- Round any whole number to a required degree of accuracy and understand that this is for the purpose of eliminating unnecessary levels of detail - Use negative numbers in context, and calculate intervals across zero - Solve number and practical problems that involve place value

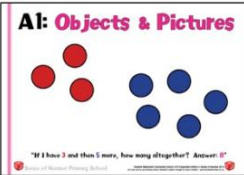
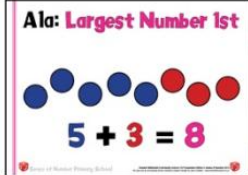
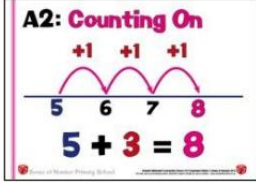
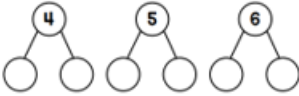
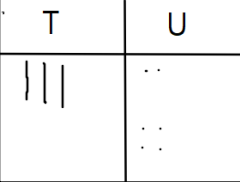
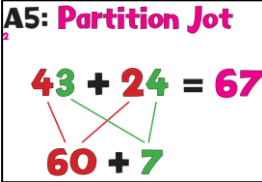
Number – Calculation - Addition

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Nursery - Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same. - Finds the total number of items in two groups by counting all of them. - Says the number that is one more than a given number. - Finds one more or one less from a group of up to five objects, then ten objects Reception - In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting. - Records, using marks that they can interpret and explain.	Recall, Represent, Use - Read, write and interpret mathematical statements involving (+) and (=) signs - Represent and use number bonds within 20 Calculations - Add two 1-digit numbers to 10 - Add 1-digit and 2-digit numbers to 20, including zero - Solve one-step problems that involve addition using concrete objects and pictorial representations, and missing number problems	Recall, Represent, Use - Recall and use addition facts to 20 fluently - Derive and use related facts up to 100 - Understand that addition of two numbers can be done in any order (commutative) - Apply their increasing knowledge of mental and written methods Calculations - Add numbers using concrete objects, pictorial and mentally to 100 including: - Add 1-digit and 2-digit number ($15 + 4$) - add 2-digit number and tens ($35 + 20$) - two 2-digit numbers ($22 + 31$) - add three 1-digit numbers ($5 + 9 + 3$)	Recall, Represent, Use - Estimate the answer to a calculation Calculations - Add numbers mentally, including: - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds - Add numbers with up to three digits, using formal written methods of columnar addition - Solve problems, including missing number problems, using number facts and place value,	Recall, Represent, Use - Estimate and use inverse operations to check answers to a calculation Calculations - Add numbers with up to 4 digits using the formal written method of columnar addition - Solve addition two-step problems in contexts, deciding which operation and method to use and why.	Recall, Represent, Use - Use rounding to check answers to calculations and determine levels of accuracy Calculations - Add whole numbers with more than 4 digits, including using formal written methods (columnar addition) - Add numbers mentally with increasingly large numbers - Solve addition multi-step problems in contexts, deciding which methods to use and why.	Recall, Represent, Use - Perform mental calculations, including with mixed operations and large numbers Calculations - Use their knowledge of the order of operations to carry out calculations involving the four operations - BODMAS - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why - Solve problems involving addition, subtraction, multiplication and division - Use estimation to check answers to calculations and determine, in the context of a problem, an

Using quantities and objects, they add two single-digit numbers and count on to find the answer. They solve problems, including doubling.						appropriate degree of accuracy.
add, more, and, make, sum, total, altogether, double, one more, two more ... ten more, how many more to make ...?, how many more is ... than ...?, how much more is ...?	Addition: add, more, and, make, altogether, total, equal to, equals, double, most, count on, number line, sum, tens, ones, partition, addition	addition, add, more, and, make, sum, total, altogether, double, near double, one more, two more ... ten more ... one hundred more, how many more to make ...?, how many more is ... than ...?, how much more is ...?	addition, add, more, and, make, sum, total, altogether, double, near double, half, halve, one more, two more ... ten more ... one hundred more, how many more to make ...?, how many more is ... than ...?, how much more is ...?, number bonds/pairs/facts	addition, add, more, and, make, sum, total, altogether, double, near double, half, halve, one more, two more ... ten more ... one hundred more, how many more to make ...?, how many more is ... than ...?, how much more is ...?, number bonds/pairs/facts	addition, add, more, and, make, sum, total, altogether, double, near double, half, halve, one more, two more ... ten more ... one hundred more, how many more to make ...? how many more is ... than ...? how much more is ...?	addition, add, more, and, make, sum, total, altogether, double, near double, half, halve, one more, two more ... ten more ... one hundred more, how many more to make ...? how many more is ... than ...? how much more is ...?

Reception Addition Calculation Methods	
	
Concrete and Pictorial Representations Counting Pouches, Five/Ten Frame, Coloured Counters, Part Whole Model, Base Ten and Ones	Reception Vocabulary - First, then, now.



Year 1 Addition Calculation Methods					
					
Year 1	Year 1	Year 1	Year 1	Year 2	Year 2
Combining objects and pictures	Adding sets starting with the largest number	Adding by counting on	Part – Whole Models	representing Base 10 jottings and adding using place value	Partition Jottings

Year 2 Addition Calculation Methods
adding 2 digit and 2-digit numbers with no carrying

Year 2	Year 2	Year 2	Year 2	Year 2	Year 2 /3	Year 3	Year 3
Step 1 Concrete Partitioning using base 10 equipment Adding 2 digit number and 10s Adding 2-digit and 2-digit numbers – no carrying	Step 2 Partition using jottings 2 digit and 1-digit Base 10 jottings	Step 3 partition jottings Adding a 2-digit number and 10s Base 10 jottings	Step 4 Partitioning Adding 2-digit and 10s	Step 5 Partition Jotting Adding 2-digit and 2 digit no carrying	Step 6 Expanded Column Method	Step 7 Column Method 2-digit add 2-digit no carrying	Step 8 Short Column Method 2-digit add 2-digit no carrying

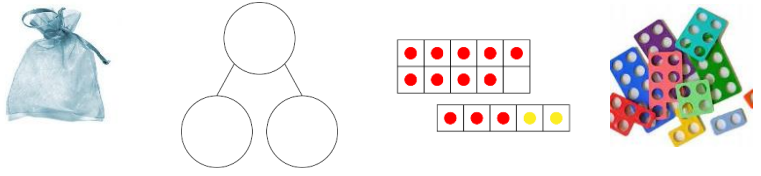
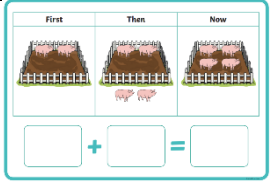
Year 3 Addition Calculation Methods									
adding 2 digit and 2-digit numbers with no carrying					adding 2 digit and 2-digit numbers with carrying				
Year 2	Year 2 /3	Year 3	Year 3	Year 3	Year 3	Year 3	Year 3	Year 3	Year 3/4
Step 5 Partition Jotting Adding 2-digit and 2 digit no carrying	Step 6 Expanded Column Method	Step 7 Column Method 2-digit add 2-digit no carrying	Step 8 Short Column Method 2-digit add 2-digit no carrying	Step 9 Concrete Partitioning using base 10 equipment with practical carrying/exchanging	Step 10 Pictorial Partitioning 2-digit add 2 digit numbers – crossing 10	Step 11 Pictorial Partitioning 2-digit add 2 digit numbers – crossing 10	Step 12 Expanded Partitioning with exchanging 2-digit add 2 digit numbers – crossing 10	Step 13 Column method with exchanges 2-digit add 2 digit numbers – crossing 10	Step 14 Formal Column Method with carrying

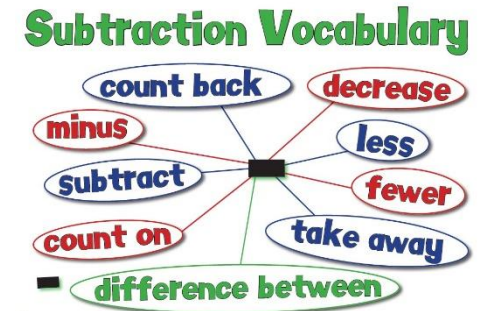
Key Stage 2 – Year 4, 5 and 6 Addition Methods

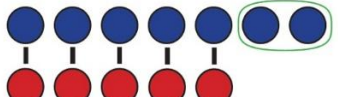
adding 2 digits with and without exchange		adding 3 digits with and without carrying		adding 4 digits with and without varying		adding 5 or more digits with and without carrying
Column Addition) $\begin{array}{r} \text{T} \quad \text{U} \\ 57 \\ + 25 \\ \hline 82 \\ \hline \end{array}$	Column Addition) $\begin{array}{r} \text{H} \quad \text{T} \quad \text{U} \\ 86 \\ + 48 \\ \hline 134 \\ \hline \end{array}$	Column Addition $\begin{array}{r} \text{H} \quad \text{T} \quad \text{U} \\ 687 \\ + 248 \\ \hline 935 \\ \hline \end{array}$		Column Addition $\begin{array}{r} 4873 \\ + 3762 \\ \hline 8635 \\ \hline \end{array}$		Column Addition $\begin{array}{r} 787567 \\ + 446278 \\ \hline 1233845 \\ \hline \end{array}$
Year 3/4	Year 4	Year 4	Year 4	Year 4/5	Year 5	Year 6
Step 14 Formal Column Method 2-digits to 2-digits with exchange	Step 15 Formal Column Method 2-digits to 2-digits with exchange	Step 16 add whole numbers with up to 4 digits using a formal written method - columnar addition – no exchange	Step 17 add whole numbers with up to 3 digits using a formal written method - columnar addition with carrying	Step 18 add whole numbers with up to 4 digits using a formal written method -columnar addition – no carrying	Step 19 add whole numbers with no more than 4 digits using a formal written method - columnar addition with carrying	Step 20 add whole numbers with more than 4 digits using a formal written method - columnar addition with and without carrying

Number – Calculations - Subtraction

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Nursery comparisons between group of things changes in something is added or taken - Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same. Reception - Finds one more or one less from a group of up to five objects, then ten objects. - In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting. - Records, using marks that they can interpret and explain. - Begins to identify own mathematical problems based on own interests and fascinations.	Recall, Represent, Use - Read, write and interpret mathematical statements involving (–) and (=) signs - Recognise subtraction facts within 20 Calculation - Subtract 1-digit and 2-digit numbers to 20, including zero Solve Problems - Solve one-step problems that involve subtraction, using concrete objects, pictorial representations, and missing number problems such as $\square - 9$	Recall, Represent, Use - Recall and use subtraction facts to 20 fluently, and derive and use related facts up to 100 - Show that subtraction of one number from can only be done with the largest number first - Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems Calculation - Subtract numbers using concrete objects, pictorial representations, and mentally, including: - a 2-digit and 1 digit number - a 2-digit number and a 10s number - two 2-digit numbers Solve Problems - using concrete objects and pictorial representations, including numbers, quantities and measures - applying their increasing knowledge of mental and written methods for subtraction	Recall, Represent, Use - Estimate the answer to a calculation and use inverse operations to check answers Calculation - Subtract numbers mentally, including: - subtract 3-digit number and 1-digit number - subtract 3-digit number and a 10s number - subtract a 3-digit number and 100s - Subtract numbers with up to three digits, using formal written methods of column subtraction Solve Problems - Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	Recall, Represent, Use - Estimate and use inverse operations to check answers to a calculation Calculation - Subtract numbers with up to 4 digits using the formal written method of column subtraction - Solve subtraction two-step problems in contexts, deciding which operations and methods to use and why. Solve Problems - Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Recall, Represent, Use - Use rounding to check answers to calculations and determine levels of accuracy Calculation - Subtract whole numbers with more than 4 digits, including using formal written methods (column subtraction) - Subtract numbers mentally with increasingly large numbers - Subtract numbers with up to 3 decimal places - Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Solve Problems - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Recall, Represent, Use - Perform mental calculations, including with mixed operations and large numbers Calculations - Use their knowledge of the order of operations to carry out calculations involving the four operations Solve Problems - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why - Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
take away, how many are left/left over? how many have gone? one less, two less, ten less ... how many fewer is ... than ...? how much less is ...? difference between	Subtraction: less, minus, subtract, take away, leaves, difference between, count back. Equals: symbol, balances, makes, total, same as, number sentence, value.	subtract, take away, how many are left/left over? how many have gone? one less, two less, ten less ... one hundred less, how many fewer is ... than ...? how much less is ...? difference between, equals, is the same as, number bonds/pairs/facts	subtract, take away, how many are left/left over? how many have gone? one less, two less, ten less ... one hundred less, how many fewer is ... than ...? how much less is ...? difference between, equals, is the same as, number bonds/pairs/facts, missing number, tens boundary, hundreds boundary	subtract, take away, how many are left/left over? how many have gone? one less, two less, ten less ... one hundred less, how many fewer is ... than ...? how much less is ...? difference between, equals, is the same as, number bonds/pairs/facts, missing number, tens boundary, hundreds boundary, inverse	difference between, equals, is the same as, number bonds/pairs/facts, missing number, tens boundary, hundreds boundary, inverse	difference between, equals, is the same as, number bonds/pairs/facts, missing number, tens boundary, hundreds boundary, ones boundary, tenths boundary, inverse

Reception Subtraction Calculation Methods	
	
Concrete and Pictorial Representations Counting Pouches, Five/Ten Frame, Coloured Counters, Part Whole Model, Base Ten and Ones	Reception Vocabulary - First, then, now.

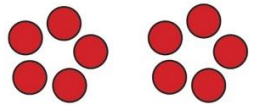
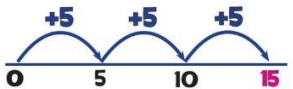
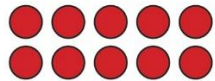


Key Stage 1 Progression in Subtraction Calculation Methods			
Objects  $7 - 3 = 4$ "What do I get if I take 3 away from 7? Answer: 4"	What's the Difference?  $7 - 5 = 2$ "How many more is 7 than 5? What is the difference?"	Expanded Column) $87 - 23 = 64$ $\begin{array}{r} 80 & 7 \\ 20 & 3 \\ \hline 60 & 4 \end{array}$	Column Subtraction $\begin{array}{r} \text{T} & \text{U} \\ 87 \\ - 23 \\ \hline 64 \end{array}$
Year 1	Year 1	Year 2	Year 2
Crossing Out	Finding difference by matching	Step 1 Simple expanded column method no exchanging	Step 2 Simple Column Method 2-digits – 2-digits no exchanging

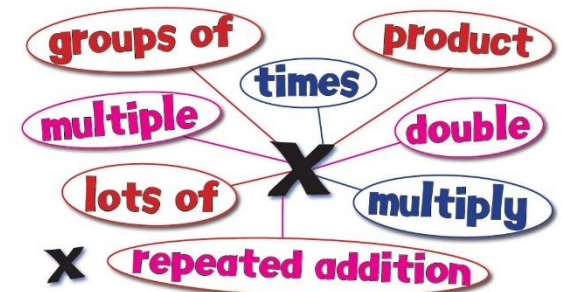
Key Stage 2 Year 3, 4, 5 and 6 Progression in Subtraction Calculation Methods					
Column Subtraction $\begin{array}{r} \text{T} & \text{U} \\ 87 \\ - 23 \\ \hline 64 \end{array}$	Column Subtraction $\begin{array}{r} \text{T} & \text{U} \\ 75 \\ - 37 \\ \hline 38 \end{array}$	Column Subtraction $\begin{array}{r} \text{H} & \text{T} & \text{U} \\ 132 \\ - 56 \\ \hline 76 \end{array}$	Column Subtraction $\begin{array}{r} \text{H} & \text{T} & \text{U} \\ 723 \\ - 356 \\ \hline 367 \end{array}$	Column Subtraction $\begin{array}{r} \text{H} & \text{T} & \text{U} \\ 5042 \\ - 1776 \\ \hline 3266 \end{array}$	Column Subtraction $\begin{array}{r} \text{H} & \text{T} & \text{U} \\ 742831 \\ - 427358 \\ \hline 315473 \end{array}$
Year 2	Year 3	Year 3	Year 3/4	Year 4/5	Year 5
Step 2 Column Method 2-digits – 2-digits no exchanging	Step 3 Column subtraction 2-digits – 2-digits with exchanging	Step 4 Column subtraction 3-digits – 2-digits with exchanging	Step 5 Column subtraction 3-digits – 3-digits with exchanging	Step 6 Column subtraction 4 digits with exchanging	Step 7 Column subtraction more than 4 digits with exchanging

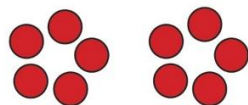
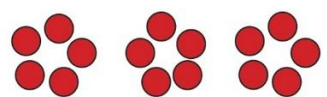
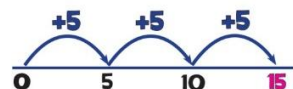
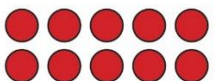
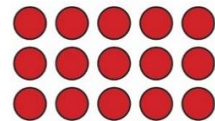
Number Multiplication - Calculations

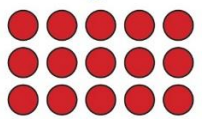
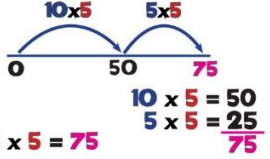
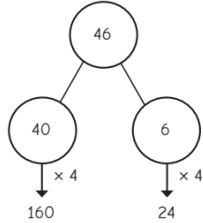
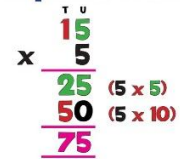
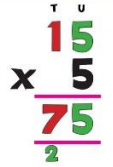
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Reception - Count by rote in 2's, tens and five's - Practically count multiple sets of numbers	Problem Solve Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representation and arrays with the support of the teacher.	Recall Represent and use - Recall and use multiplication facts for the 2, 5 and 10 multiplication tables - Recognise odd and even numbers - Understand that multiplication of two numbers can be done in any order (commutative) Calculations - Calculate mathematical statements for multiplication within the multiplication tables and write them using the ($\times$), ($\div$) and ($=$) signs Problem Solve Solve one step problems involving multiplication using: - Materials - Arrays - repeated addition - mental methods, - multiplication facts - Problems in contexts	Recall Represent and use - Recall and use multiplication facts for the 3, 4 and 8 multiplication tables Calculations - Write and calculate mathematical statements for multiplication using the multiplication tables that they know, including 2-digit $\times$ 1-digit numbers - using mental and progressing to formal written methods – expanded and short method Problem Solve - Solve problems, including missing number problems, involving multiplication	Recall Represent and use - Recall multiplication facts for multiplication tables up to 12×12 - Use place value, known and derived facts to multiply mentally, including: multiplying by 0 and 1 and multiplying together three numbers - Recognise and use factor pairs and commutability in mental calculations Calculations - Multiply 2-digit $\times$ 1-digit number - Multiply 3-digit $\times$ 1-digit number using a formal written method Problem Solve - Solve problems involving multiplication and adding, including the distributive law to multiply 2-digit numbers by 1-digit	Recall Represent and use - Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers - Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers - Establish whether a number up to 100 is prime and recall prime numbers up to 19 - Recognise and use square numbers and cube numbers, and the notation (2) and (3) Calculations - Multiply 4 digits by 1 digit - Multiply 2-digits by 2 digits - Multiply 3 digits by 2 digits - Multiply 4 digits by 2 digits using a formal written method, including long multiplication - Multiply numbers mentally drawing upon known facts - Multiply whole numbers and those involving decimals by 10, 100 and 1000 Problem Solve - Solve problems involving multiplication including using their knowledge of factors and multiples, squares and cubes - Solve problems involving multiplication including scaling by simple fractions and problem solving involving simple rates - Solve problems involving $+$, $-$, $\times$ and $\div$ and a combination of these, including understanding the meaning of the $=$ sign	Recall Represent and use - Identify common factors, common multiples and prime numbers - Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy Calculations - Multiply multi-digit numbers up to 4 digits by a 2-digit whole number using the formal written method of long multiplication - Perform mental calculations, including with mixed operations and large numbers Problem Solve - Use their knowledge of the order of operations (BODMAS) to carry out calculations involving the four operations
doubling, number patterns	Multiply, multiplication, groups, lots of, repeated addition, array, times.	multiplication, multiply, multiplied by, multiple, groups of, times, once, twice, three times ... ten times, repeated addition, grouping, doubling array, row, column, number patterns, multiplication table, multiplication fact	multiplication, multiply, multiplied by, multiple, factor, groups of, times, product, once, twice, three times ... ten times, repeated addition, doubling, array, row, column, number patterns, multiplication table, multiplication fact	multiplication, multiply, multiplied by, multiple, factor, groups of, times, product, doubling, array, row, column, number patterns, multiplication table, multiplication fact, inverse, square, squared, cube, cubed	factor, groups of, times, product, once, twice, three times ... ten times, repeated addition, doubling,, array, row, column, number patterns, multiplication table, multiplication fact, inverse, square, squared, cube, cubed	factor, groups of, times, product, once, twice, three times ... ten times, repeated addition, doubling, array, row, column, number patterns, multiplication table, multiplication fact, inverse, square, squared, cube, cubed

Year 1 Multiplication Calculation Methods			
Groups)  "2 groups of 5 counters makes 10 counters altogether"	Repeated Addition (Groups)  $5 \times 3 = 5 + 5 + 5 = 15$ "5 multiplied by 3" means "5, 3 times", which gives "3 lots of 5"	Repeated Addition (Number Line)  $5 \times 3 = 5 + 5 + 5 = 15$ "5 times 3" means "5, 3 times"	Arrays)  "2 groups of 5 counters" or "5 groups of 2 counters" = "10 counters altogether"
Year 1	Year 1	Year 2	Year 2
Partitioning groups and counting in multiples of 2, 5 and 10	understanding multiplication as repeated addition	repeated addition using a number line	Using pictorial Arrays

Multiplication Vocabulary



Year 2 Multiplication Calculation Methods				
Groups)  "2 groups of 5 counters makes 10 counters altogether"	Repeated Addition (Groups)  $5 \times 3 = 5 + 5 + 5 = 15$ "5 multiplied by 3" means "5, 3 times", which gives "3 lots of 5"	Repeated Addition (Number Line)  $5 \times 3 = 5 + 5 + 5 = 15$ "5 times 3" means "5, 3 times"	Arrays)  "2 groups of 5 counters" or "5 groups of 2 counters" = "10 counters altogether"	Arrays  $3 \times 5 = 15$ or $5 \times 3 = 15$
Year 1	Year 1	Year 2	Year 2	Year 3
Partitioning groups and counting in multiples of 2, 5 and 10	understanding multiplication as repeated addition	repeated addition using a number line	Using pictorial Arrays	Using arrays to illustrate associative law

Year 3 Multiplication Calculation Methods					
Arrays  $3 \times 5 = 15$ or $5 \times 3 = 15$	Multi Boing!  $10 \times 5 = 50$ $5 \times 5 = 25$ $15 \times 5 = 75$	 $40 \times 4 = 160$ $6 \times 4 = 24$	Partitioning $15 \times 5 = 75$ $10 \times 5 = 50$ $5 \times 5 = 25$ $50 + 25 = 75$	Expanded Column)  $15 \times 5 = 75$	Column Multiplication  $15 \times 5 = 75$
Year 2 and 3	Year 3	Year 3	Year 3	Year 3	Year 3
Arrays	Multi Boing!	Part whole model	Partitioning	Expanded Colum	Simple formal method 2-digit x 1-digit

Year 4 Multiplication Calculation Methods

Expanded Column) $\begin{array}{r} \text{T U} \\ 15 \\ \times 5 \\ \hline 25 \text{ (5} \times 5\text{)} \\ 50 \text{ (5} \times 10\text{)} \\ \hline 75 \end{array}$	Column Multiplication $\begin{array}{r} \text{T U} \\ 15 \\ \times 5 \\ \hline 75 \\ 2 \end{array}$	Column Multiplication $\begin{array}{r} \text{H T U} \\ 43 \\ \times 6 \\ \hline 258 \\ 1 \end{array}$	Column Multiplication $\begin{array}{r} \text{H T U} \\ 147 \\ \times 4 \\ \hline 588 \\ 1 \ 2 \end{array}$	Column Multiplication $\begin{array}{r} 3647 \\ \times 4 \\ \hline 14588 \\ 2 \ 1 \ 2 \end{array}$
Year 3	Year 3	Year 4	Year 4	Year 5
Expanded Column	Simple formal method 2-digit x 1-digit	Formal method 2-digit x 1-digit	Formal Method 3-digits x 1 digits	Formal Method 4 digits x 1 digit

Year 5 Multiplication Calculation Methods

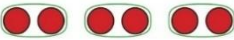
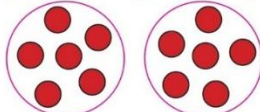
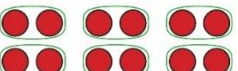
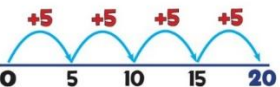
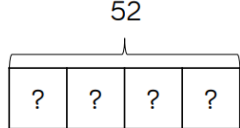
Column Multiplication $\begin{array}{r} \text{H T U} \\ 147 \\ \times 4 \\ \hline 588 \\ 1 \ 2 \end{array}$	Column Multiplication $\begin{array}{r} 3647 \\ \times 4 \\ \hline 14588 \\ 2 \ 1 \ 2 \end{array}$	Long Multiplication $\begin{array}{r} 43 \\ \times 65 \\ \hline 215 \text{ (5} \times 43\text{)} \\ + 2580 \text{ (60} \times 43\text{)} \\ \hline 2795 \end{array}$	Long Multiplication $\begin{array}{r} 243 \\ \times 68 \\ \hline 1944 \text{ (8} \times 243\text{)} \\ + 14580 \text{ (60} \times 243\text{)} \\ \hline 16524 \end{array}$	Jump! $\begin{array}{r} \times 1000 \ 63400 \\ \times 100 \ 6340 \\ \times 10 \ 634 \\ +10 \ 63.4 \\ +100 \ 6.34 \\ +1000 \ 0.634 \\ \hline 0.0634 \end{array}$
Year 4	Year 5	Year 5	Year 5	Year 5
Year 4 Formal Method 3-digits x 1 digits	Formal Method 4 digits x 1 digit	Long Multiplication 2-digits x 2-digits	Long Multiplication 3-digits x 2 digits	Multiplying by 10, 100 and 1000

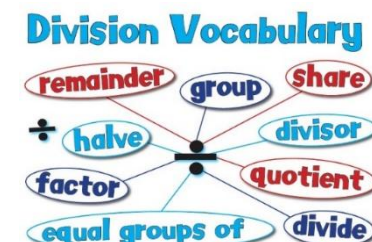
Year 6 Multiplication Calculation Methods

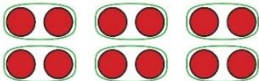
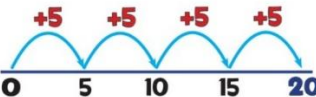
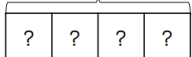
Column Multiplication $\begin{array}{r} 3647 \\ \times 4 \\ \hline 14588 \\ 2 \ 1 \ 2 \end{array}$	Long Multiplication $\begin{array}{r} 43 \\ \times 65 \\ \hline 215 \text{ (5} \times 43\text{)} \\ + 2580 \text{ (60} \times 43\text{)} \\ \hline 2795 \end{array}$	Long Multiplication $\begin{array}{r} 243 \\ \times 68 \\ \hline 1944 \text{ (8} \times 243\text{)} \\ + 14580 \text{ (60} \times 243\text{)} \\ \hline 16524 \end{array}$	Jump! $\begin{array}{r} \times 1000 \ 63400 \\ \times 100 \ 6340 \\ \times 10 \ 634 \\ +10 \ 63.4 \\ +100 \ 6.34 \\ +1000 \ 0.634 \\ \hline 0.0634 \end{array}$	Long Multiplication $\begin{array}{r} 3786 \\ \times 48 \\ \hline 30288 \text{ (8} \times 3786\text{)} \\ + 151440 \text{ (40} \times 3786\text{)} \\ \hline 181728 \end{array}$	Column Multiplication $\begin{array}{r} \text{T U} = \frac{1}{10} \\ 3.6 \\ \times 4 \\ \hline 14.4 \\ 2 \end{array}$
Year 5	Year 5	Year 5	Year 5	Year 6	Year 6
Formal Method 4 digits x 1 digit	Long Multiplication 2-digits x 2-digits	Long Multiplication 3-digits x 2 digits	Multiplying by 10, 100 and 1000	Long Multiplication 4 digits x 2 digits	Multiplying Decimals

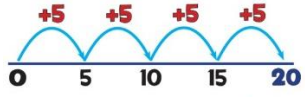
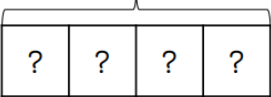
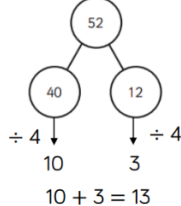
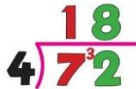
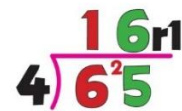
Number Division - Calculations

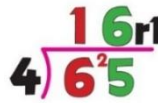
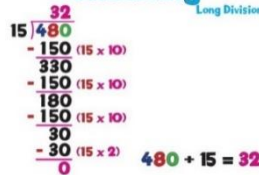
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Reception - Understand the concept of division as sharing fairly in a practical context - Use vocabulary associated with sharing	Solve one-step sharing /division problems based on everyday experience, by calculating the answer using concrete objects and pictorial representations with the support of the teacher.	- Understand how to share an amount into groups without remainders - Complete calculations for division using pictorial methods and write them using the ($\div$) and ($=$) signs - Begin to understand that division cannot be done in any order (commutative) - Solve problems involving division, using materials, arrays, mental methods and division facts, and problems in contexts.	- Recall and use division facts for the 3, 4 and 8 multiplication tables - Write and calculate mathematical statements for division using the multiplication tables that they know, including for two-digit numbers divided by one-digit and progressing to a formal written method - Solve problems, including missing number problems, involving division	- Recall multiplication and division facts for multiplication tables up to 12×12 - Use place value, known and derived facts to divide mentally, including dividing by 1;	- Divide numbers up to 4 digits by a one-digit number using the formal written method (stop) of short division and interpret remainders appropriately for the context - Divide whole numbers and those involving decimals by 10, 100 and 1000 - Solve problems involving division	- Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context - Use their knowledge of the order of operations to carry out calculations involving the four operations BODMAS - Solve problems involving addition, subtraction, multiplication and division - Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
sharing, halving, number patterns	division, dividing, sharing, halving, array, number patterns	division, dividing, divide, divided by, divided into, sharing, share, share equally, left, left over, equal groups of, halving, number patterns, division fact	division, dividing, divide, divided by, divided into, sharing, share, share equally, left, left over, equal groups of, halving, number patterns, division fact, remainder	division, dividing, divide, divided by, divided into, sharing, share, share equally, left, left over, equal groups of, halving, number patterns, division fact, remainder, inverse	division, dividing, divide, divided by, divided into, sharing, share, share equally, left, left over, equal groups of, halving, number patterns, division fact, remainder	division, dividing, divide, divided by, divided into, sharing, share, share equally, left, left over, equal groups of, halving, number patterns, division fact, remainder

Year 1/ 2 Division Calculation Methods				
Grouping (Concept)  "How many groups of 2 can I make out of 6?" Answer: 3	Division as Sharing $12 \div 2 = 6$  "If I share 12 into 2 equal amounts, how many in each group?" Answer: 6	Division as Grouping $12 \div 2 = 6$  "How many groups of 2 can I fit into 12?" Answer: 6	Grouping on a Number Line  $20 \div 5 = 4$ "How many 5s in 20?" Answer: 4	 52
Year 1	Year 2	Year 2 / 3	Year 2 / 3	Year 3
Grouping	Division as grouping	Division as grouping	Grouping on a numberline	Bar Models



Year 3 Division Calculation Methods				
Division as Grouping $12 \div 2 = 6$ "How many groups of 2 can I fit into 12?" Answer: 6 	Grouping on a Number Line  $20 \div 5 = 4$ "How many 5s in 20?" Answer: 4	52 	Short Division) $72 \div 4 = 18$ 	
Year 2 /3	Year 2 /3	Year 3	Year 3	Year 4
Division as grouping	Grouping on a numberline	Bar Models	Part whole Models	Formal method Simple Short Division (Bus Stop)

Year 4 Division Calculation Methods				
Grouping on a Number Line  $20 \div 5 = 4$ "How many 5s in 20?" Answer: 4	52 	52 	Short Division) $72 \div 4 = 18$ 	Short Division) $65 \div 4 = 16r1$ 
Year 2 /3	Year 3	Year 3	Year 4	Year 4
Grouping on a numberline	Bar Models	Part whole Models	Step 1 Formal method Simple Short Division (Bus Stop)	Step 2 Formal method Simple Short Division with remainders (Bus Stop)

Year 5 Division Calculation Methods				
Short Division) $72 \div 4 = 18$ 	Short Division) $65 \div 4 = 16r1$ 	Short Division $136 \div 4 = 34$ 	Short Division $394 \div 6 = 65r4$ 	Chunking Long Division 
Year 4	Year 4	Year 4/5	Year 5	Year 6
Step 1 Formal method Simple Short Division (Bus Stop)	Step 2 Formal method Simple Short Division with remainders (Bus Stop)	Step 3 Formal Method Short Division with larger numbers	Step 4 Formal Method Short Division with larger numbers and remainders	Step 5 Formal Method Introduction to chunking

Year 6 Division Calculation Methods					
Short Division $136 \div 4 = 34$ 	Short Division $394 \div 6 = 65r4$ 	Chunking 	Chunking 	Long Division 	D10i: Short Division $87.5 \div 7 = 12.5$ 
Year 5	Year 5	Year 6	Year 6	Year 6	Year 6
Step 3 Formal Method Short Division with larger numbers	Step 4 Formal Method Short Division with larger numbers and remainders	Step 5 Formal Method Introduction to chunking	Step 6 Formal Method Introduction to chunking	Step 7 Formal Method Introduction to chunking with remainders	Formal Method Short Division using Decimals

Number Fractions – recognise, write and compare

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
- Practically experience sharing objects and amounts into halves and quarters - Understand that sharing should be equal /fair	- Recognise, find and name a half as 1 of 2 equal parts of an object, shape, quantity - Recognise, find, name a quarter as 1 of 4 equal parts of an object, shape or quantity.	- Recognise, find, name and write fractions $\frac{1}{2}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity - Compare and recognise equivalent fractions $\frac{1}{2}$ and $\frac{2}{4}$	- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 - Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators - Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators - Recognise and show, using diagrams, equivalent fractions with small denominators - Compare and order unit fractions, and fractions with the same denominators	- Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten - Recognise and show, using diagrams, families of common equivalent fractions	- Identify, name, write equivalent fractions of a given fraction represented visually inc $\frac{1}{10}$ and $\frac{1}{100}$ - Recognise mixed numbers and improper fractions and convert from one form to the other - write mathematical statements > 1 as a mixed number 	- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination - Compare and order fractions, including fractions > 1

Share, equal, equal sharing, parts, whole, halves, half, quarters	Share, equal, equal sharing, parts, whole, halves, half, quarters (one/two/three), $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, parts of the whole	Share, equal, equal sharing, parts, whole, halves, half, quarters (one/two/three), $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, parts of the whole, Fraction, numerator, denominator,	Fraction, equivalent fraction, mixed number, numerator, denominator, equal part, equal grouping, equal sharing, parts of a whole, half, two halves, one of two equal parts, quarter, two quarters, three quarters, one of four equal parts, one third, two thirds, one of three equal parts, sixths, sevenths, eighths, tenths.	Fraction, equivalent fraction, mixed number, numerator, denominator, equal part, equal grouping, equal sharing, parts of a whole, half, two halves, one of two equal parts, quarter, two quarters, three quarters, one of four equal parts, one third, two thirds, one of three equal parts, sixths, sevenths, eighths, tenths.	fraction, proper/improper fraction, equivalent fraction, mixed number, numerator, denominator equivalent, reduced to, cancel, equal part, equal grouping, equal sharing, parts of a whole half, two halves, one of two equal parts, quarter, two quarters, three quarters, one of four equal parts, one third, two thirds sixths, sevenths, eighths, tenths ..., hundredths, thousandths, addition, subtraction, common denominator, common multiple	fraction, proper/improper fraction, equivalent fraction, numerator, denominator, common multiple, mixed number, numerator, denominator, equivalent, reduced to, equal part, equal grouping, equal sharing, parts of a whole, half, two halves, one of two equal parts, quarter, two quarters, three quarters, one of four equal parts, one third, two thirds, one of three equal parts, sixths, sevenths, eighths, tenths ..., hundredths, thousandths, decimal, decimal fraction
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Fractions – Calculations and Solving Problems

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Write simple fractions for example $\frac{1}{2}$ of 6 = 3 $\frac{1}{3}$ of 12 is 4.	- Add and subtract fractions with the same denominator within one whole $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ - Solve problems that involve all of the above.	- Add and subtract fractions with the same denominator - Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number - Solve simple measure and money problems involving fractions	- Add and subtract fractions with the same denominator and denominators that are multiples of the same number - Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams $\frac{2}{5} + \frac{4}{5} = \frac{6}{5}$	- Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions - Multiply simple pairs of proper fractions, writing the answer in its simplest form - Divide proper fractions by whole numbers - Associate a fraction with division and calculate decimal fraction equivalents $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ $\frac{1}{3} \div 2 = \frac{1}{6}$

		Share, equal, equal sharing, parts, whole, halves, half, quarters (one/two/three), $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, parts of the whole	Fraction, equivalent fraction, mixed number, numerator, denominator, equal part, equal grouping, equal sharing, parts of a whole, half, two halves, one of two equal parts, quarter, two quarters, three quarters, one of four equal parts, one third, two thirds, one of three equal parts, sixths, sevenths, eighths, tenths.	fraction, equivalent fraction, mixed number, numerator, denominator, equal part, equal grouping, equal sharing, parts of a whole, half, two halves, one of two equal parts, quarter, two quarters, three quarters, one of four equal parts, one third, two thirds, one of three equal parts, sixths, sevenths, eighths, tenths	fraction, proper/improper fraction, equivalent fraction, mixed number, numerator, denominator, equal part, equivalent, reduced to, cancel, equal part, equal grouping, equal sharing, parts of a whole half, two halves, one of two equal parts, quarter, two quarters, three quarters, one of four equal parts, one third, two thirds sixths, sevenths, eighths, tenths ..., hundredths, thousandths, addition, subtraction, common denominator, common multiple	fraction, proper/improper fraction, equivalent fraction, numerator, denominator, common multiple, mixed number, numerator, denominator, equivalent, reduced to, equal part, equal grouping, equal sharing, parts of a whole, half, two halves, one of two equal parts, quarter, two quarters, three quarters, one of four equal parts, one third, two thirds, one of three equal parts, sixths, sevenths, eighths, tenths ..., hundredths, thousandths, decimal, decimal fraction
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Decimals

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				Read and Write Decimals - Count up and down in tenths/ hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. - Recognise and write decimal equivalents of any number of tenths or hundredths Decimals as Fractions of amounts - recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ Ordering/Rounding Decimals - Round decimals with one decimal place to the nearest whole number - Compare numbers with the same number of decimal places up to two decimal places Calculating with Decimals - Find the effect of dividing a one- or two-	Read and Write Decimals - Read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] Ordering/Rounding Decimals - recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents - round decimals with two decimal places to the nearest whole number and to one decimal place - Read, write, order and compare numbers with up to three decimal places Calculating with Decimals - solve problems involving number up to three decimal places - solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$	Read and Write Decimals - Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction - identify the value of each digit in numbers given to three decimal places Order/Compare Decimals - Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. Calculating with Decimals - multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places - multiply one-digit number with up to two decimal places by whole numbers - use written division methods in cases where

				digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths Solve simple measure and money problems involving fractions and decimals to two decimal Place	, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25	the answer has up to two decimal places Solve problems which require answers to be rounded to specified degrees of accuracy
				tenths, hundredths, decimal, fraction, proper/improper fraction, decimal point, decimal place value, decimal equivalent, mixed number, numerator, denominator,	Multiplying, dividing, addition, subtraction, total, hundred, ten, thousand, decimal point, place holder, tenths, thousandths, hundredths, calculation, decimal place, mixed number, numerator, denominator,	equivalent, tenth, hundredth, thousandth decimal, decimal fraction decimal point, decimal place percentage, mixed number, numerator, denominator,

Key Stage 2 Year 5 and 6 Addition Methods - Decimals

adding 2 digits with and without carrying		adding 3 digits with and without carrying	adding 4 digits with and without carrying	
Column Addition $\begin{array}{r} \text{U} \cdot \frac{1}{10} \\ 4.8 \\ + 3.8 \\ \hline 8.6 \end{array}$	Column Addition $\begin{array}{r} \text{U} \cdot \frac{1}{10} \cdot \frac{1}{100} \\ 5.65 \\ + 3.29 \\ \hline 8.94 \end{array}$	Column Addition $\begin{array}{r} \text{T} \text{ U} \cdot \frac{1}{10} \\ 76.7 \\ + 58.5 \\ \hline 135.2 \\ \text{1} \text{ 1} \text{ 1} \end{array}$	Column Addition <i>With Money</i> $\begin{array}{r} \text{£}38.25 \\ + \text{£}27.46 \\ \hline \text{£}65.71 \\ \text{1} \quad \text{1} \end{array}$	$\begin{array}{r} \text{T} \text{ U} \cdot \frac{1}{10} \cdot \frac{1}{100} \\ 73.4 \\ + 5.67 \\ \hline 79.07 \\ \text{1} \end{array}$
Year 5	Year 5	Year 5	Year 5	Year 5
adding decimals to one decimal place using column method	adding decimals to 2 decimal places using column method	Adding decimals	Adding money	adding decimals with mixed decimal places

Key Stage 2 Progression in Subtraction Calculation Methods

Subtraction with Decimals		
Column Subtraction $\begin{array}{r} \text{T} \text{ U} \cdot \frac{1}{10} \\ 12.4 \\ - 8.7 \\ \hline 4.7 \end{array}$	Column Subtraction $\begin{array}{r} \text{T} \text{ U} \cdot \frac{1}{10} \cdot \frac{1}{100} \\ 72.43 \\ - 47.85 \\ \hline 24.58 \end{array}$	$12.4 - 5.97 = 6.43$ $\begin{array}{r} \text{T} \text{ U} \cdot \frac{1}{10} \cdot \frac{1}{100} \\ 12.40 \\ - 5.97 \\ \hline 6.43 \end{array}$
Year 5	Year 6	Year 6
Column Subtraction with decimals 1 – decimal place	Column Subtraction with decimals 2 – decimal places	Column Subtraction with decimals mixed decimal places

Percentages

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					- recognise the % symbol and understand that percent relates to 'number of parts per 100' - write percentages as a fraction with the denominator 100	Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison.
					Percent, fraction, decrease, increase, estimate, whole, bar model, fractions, decimals, units	Percent, fraction, decrease, increase, estimate, whole, bar model, fractions, decimals, units

Number - Fractions, Decimals and Percentages

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	•	•	•	Solve simple measure and money problems involving fractions and decimals to 2 decimal places	- solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ - know percentage and decimal equivalents for fraction with a denominator of 10 or 25	- associate a fraction with division and calculate decimal fraction equivalents - e.g. 0.375 for a simple fraction $\frac{3}{8}$ - recall and use equivalences between simple fractions, decimals and percentages including in different contexts
				tenths, hundredths, decimal, fraction, decimal point, decimal place value, decimal equivalent.	fraction, proper/improper fraction, equivalent fraction, mixed number, numerator, denominator, equivalent, equal, parts of a whole, ... of ... equal parts, tenths, hundredths, thousandths, decimal, decimal fraction, decimal point, decimal place, decimal equivalent, proportion, in every, for every, percentage, per cent, %	part, equal parts, unequal parts fraction, proper / improper fraction mixed number numerator, denominator equivalent, reduced to, cancel one whole half, quarter, eighth third, sixth, ninth, twelfth fifth, tenth, twentieth, hundredth, thousandth proportion, ratio in every, for every to every, as many as decimal, decimal fraction decimal point, decimal place percentage, per cent, % integer

Ratio and Proportion

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
						- Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts - Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison - Solve problems involving similar shapes where the scale factor is known or can be found - Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.
						proportion, in every, for every ratio

Algebra

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
						- Use simple formulae - Generate and describe linear number sequences - Express missing number problems algebraically - Find pairs of numbers that satisfy an equation with two unknowns - Enumerate possibilities of combinations of two variables.

						Formulae Linear number sequence Equation Enumerate Variables Missing numbers, lengths, coordinates, angles Equivalent expressions Number patterns, puzzles
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Measurement: Length

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
- Begin to compare length and height and use appropriate vocabulary to describe - Make comparative measurement of length using nonstandard units	- Compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] - Measure and begin to record lengths and heights using standard units	- Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) - Compare and order lengths using $>$, $<$ and $=$	- Measure length with accuracy using m, cm and mm - Compare lengths m, cm and mm - Compare and order lengths using $>$, $<$ and $=$ - add and subtract: lengths (m/cm/mm)	- Measure length with accuracy using m, cm and mm - Convert between different units of measure (for example, kilometre and metre), - Estimate, compare and calculate different measures	- Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre) - Understand and use approximate equivalences between metric units and common imperial units such as inches - Use all four operations to solve problems involving measure and using decimal notation and scaling	- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate - Use, read, write and convert between standard units, converting measurements of length from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places - Convert between miles and kilometres
Long, longer, longest, short, shorter shortest, tall, taller, tallest, high, higher, highest	Estimate, measure, centimetres, metres, longer, shorter, equal, ruler, length, height, width, long, short and tall	Estimate, measure, centimetres, metres, longer, shorter, equal, ruler, length, height, width, long, short and tall.	millimetre, centimetre, metre, kilometre, mile, length, height, width, depth, long, short, tall, high, low, wide, narrow, thick, thin, longer, shorter, taller, higher ... and so on, longest, shortest, tallest, highest ... and so on, far, further, furthest, near, close, distance apart ... between ... to ... from, perimeter, ruler, metre stick, tape measure.	millimetre, centimetre, metre, kilometre, mile, length, height, width, depth, breadth, wide, narrow, thick, thin, longer, shorter, taller, higher longest, shortest, tallest, highest ... and so on, far, further, furthest, near, close, distance apart ... between ... to ... from, edge, perimeter, area, covers, square centimetre (cm ²), ruler, metre stick, tape measure.	millimetre, centimetre, metre, kilometre, mile length, height, width, depth, breadth long, short, tall high, low wide, narrow thick, thin longer, shorter, taller, higher ... and so on longest, shortest, tallest, highest ... and so on far, further, furthest, near, close distance apart ... between ... to ... from edge, perimeter area, covers square centimetre (cm ²), square metre (m ²), square millimetre (mm ²) ruler metre stick, tape measure	centimetre, metre, millimetre, kilometre, mile, yard, foot, feet, inch, inches length, height, width, depth, breadth long, short, tall high, low wide, narrow thick, thin longer, shorter, taller, higher ... and so on longest, shortest, tallest, highest ... and so on far, further, furthest, near, close distance apart ... between ... to ... from edge, perimeter, circumference area, covers square centimetre (cm ²), square metre (m ²), square millimetre (mm ²) ruler metre stick, tape measure

Measurement – Area and Perimeter

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			- Recognise what is the perimeter of a 2D shape - Calculate the perimeter of simple 2-D shapes using length x height	- Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres - Find the area of rectilinear shapes by counting squares	- Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres - Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes	- Recognise that shapes with the same areas can have different perimeters and vice versa - Recognise when it is possible to use formulae for area and volume of shapes - Calculate the area of parallelograms and triangles
			millimetre, centimetre, metre, kilometre, length, height, width, depth, breadth, perimeter, ruler, metre stick, tape measure.	millimetre, centimetre, metre, kilometre, length, height, width, depth, breadth, perimeter, area, covers, square centimetre (cm ²), ruler, metre stick, tape measure.	length, height, width, square centimetre (cm ²), square metre (m ²), square millimetre (mm ²), area, perimeter, units, formula	Area, length, width, factors, perimeter, distance, triangles, rectangles, formula, rectilinear, estimate, parallelogram, estimate, approximate, right angle

Measurement – Mass

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
- Orders two items by weight or capacity. ELG - Children use everyday language to talk about size and weight, to compare quantities and objects and to solve problems. - They explore characteristics of everyday objects and shapes and use mathematical language to describe them.	Compare, describe and solve practical problems for mass and weight [e.g.: heavy/light, heavier] Measure and begin to record mass/weight	- Choose and use appropriate standard units to estimate and measure mass (kg/g) - Use balance scales to compare the mass of objects - Compare and order mass and record the results using >, < and =	- Recognise the appropriate units used to measure mass - Use scales to practically measure the weight of objects using g and kg - Read the weight of objects on a variety of scales - Compare a variety of familiar objects by weight - Compare and order mass using >, < and = - Complete problems to add and subtract mass (kg/g)	Convert between different units of measure [for example, kilometre to metre]	- Convert between different units of metric measure (for example, gram and kilogram) - Understand / use approximate equivalences between metric and imperial units	- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate - Use, read, write and convert between standard units, converting mass from a smaller unit of measure to a larger unit, and vice versa, using notation to up to three places
Weigh, weighs, balances Heavy, heavier, heaviest, light, lighter, lightest	Weigh, weighs, balance, heavy, scales, heaviest, heavier than, lighter, light, lightest, equal. measure,	Weigh, weighs, balance, heavy, scales, heaviest, heavier than, lighter, light, lightest, equal. measure, gram, kilogram, units of measure, compare, record	kilogram, half kilogram, gram, weigh, weighs, balances, heavy, light, heavier than, lighter than, heaviest, lightest, scales.	kilogram, half kilogram, gram, weigh, weighs, balances, heavy, light, heavier than, lighter than, heaviest, lightest, scales.	kilogram, half kilogram, gram, tonne, convert, weigh, weighs, balances, heavy, light, heavier than, lighter than, heaviest, lightest, scales.	kilogram, half kilogram, gram, tonne, convert, weigh, weighs, balances, heavy, light, heavier than, lighter than, heaviest, lightest, scales.

Measurement – Capacity and Volume

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
- Children experience capacity and volume measures in real life contexts, Enjoys filling and emptying containers. - Orders two items by weight or capacity. - use everyday language to talk about size and capacity, - to compare quantities and objects and to solve problems. them.	- Children experience capacity and volume measures in real life contexts, Compare, describe and solve practical problems for capacity and volume - Measure and begin to record capacity and volume	- Children experience capacity and volume measures in real life contexts, using appropriate apparatus and equipment. - Choose and use appropriate standard units to estimate and measure capacity (litres/ml) to the nearest appropriate unit - Use measuring vessels to measure capacity - Compare and order volume/capacity and record the results using >, < and =	- Children experience measures in real life contexts, using appropriate apparatus and equipment. - Accurately measure amounts using litres and millilitres - Understand the difference between volume and capacity - Compare and order the volume and capacity of containers - Understand equivalence in capacity e.g. 100ml = 1 litre - Add and subtract volume/capacity (l/ml)	- Convert between different units of volume and capacity measure litres and millilitres - Understand equivalence in capacity e.g. 100ml = 1 litre	- Convert between different units of metric measure (for example, litre and millilitre) - Understand and use approximate equivalences between metric units and common imperial units such as pints - Estimate volume – e.g. using 1 cm³ blocks to build cuboids and capacity – e.g. water	- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate - Use, read, write and convert between standard units, converting measurements of volume from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places - Recognise when it is possible to use formulae for volume of shape - Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units
Full, half full, empty, Holds, container	litre, half litre capacity volume full empty more than less than half full quarter full holds container	Equal, measure, units of measure, compare, record, litres, millilitres, capacity, volume,	litre, half litre, millilitre, capacity, volume, full, empty, more than, less than, half full, quarter full, holds, contains, container.	litre, half litre, millilitre, capacity, volume, full, empty, more than, less than, half full, quarter full, holds, contains, container, measuring, cylinder,	litre, half litre, millilitre, capacity, volume, full, empty, more than, less than, half full, quarter full, holds, contains, container, measuring, cylinder, pint, gallon, formula,	litre, half litre, millilitre, centilitre, cubic centimetres (cm ³), cubic metres (m ³), cubic millimetres (mm ³), capacity, volume, estimate, equivalent, approximate, formula

Measurement - Money

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
- Play and sort with coins of different denominations - Use money in role play	- Understand the concept of unitising – that one item can represent different amounts - Recognise and know the value of different denominations of coins and notes - Sort coins and notes into sets - Order coins and notes according to their value - Compare the value of coins using <, >, = - Make amounts of money using knowledge of 2, 5 and 10	- Recognise and use symbols for pounds (£) and pence (p); - combine amounts to make a particular monetary value - Find different combinations of coins that equal the same amounts of money - Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	- Understand the exchange of (£) and (p). 100p =£1 - Record amounts of money using formal notation £3.30 / 78p - Find different combinations of coins that equal the same amounts of money - Add and subtract amounts of money to give change, using both £ and p in practical contexts	Estimate, compare and calculate different measures, including money in pounds and pence	Use all four operations to solve problems involving money using decimal notation	Solve problems involving the calculation and conversion of units of money, using decimal notation up to two decimal places where appropriate
Money, coin, penny, pence, pound, price, cost, pay How much? How many? Total	money, coin, penny, pence, pound, price, cost, buy, bought, sell, sold, spend, spent, pay, change, costs more, costs less, costs the same as, how much ...?, how many ...?, total.	money, coin, penny, pence, pound, price, cost, buy, bought, sell, sold, spend, spent, pay, change, costs more, costs less, costs the same as, how much ...?, how many ...?, total.	money, coin, penny, pence, pound, price, cost, buy, bought, sell, sold, spend, spent, pay, change, dear, costs more, cheap, costs less, cheaper, costs the same as, how much ...?, how many ...?, total.	money, coin, penny, pence, pound, price, cost, buy, bought, sell, sold, spend, spent, pay, change, dear, costs more, cheap, costs less, cheaper, costs the same as, how much ...?, how many ...?, total.	money coin penny, pence, pound price, cost buy, bought, sell, sold spend, spent pay change dear, costs more cheap, costs less, cheaper costs the same as how much ...? how many ...? total discount currency	money coin penny, pence, pound price, cost buy, bought, sell, sold spend, spent pay change dear, costs more cheap, costs less, cheaper costs the same as how much ...? how many ...? total discount currency profit, loss

Measures - Time

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
- sequence familiar events in chronological order - use a range of vocabulary to describe when things happen - use vocabulary to describe when things happen during the day – morning, afternoon and night - say the days of the week in order and begin to use vocabulary such as yesterday, today and tomorrow	- Sequence familiar events in chronological order - use language to describe when things happen [e.g. before and after, next, first, today, tomorrow, morning, afternoon and evening] - Recognise and use language relating to dates (know the days of the week, weeks, months of the year and years) - Tell the time on an analogue clock face to the hour and half past the hour and draw the	- Measure and begin to record time (hours, minutes, seconds) - Compare and sequence intervals of time - Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times - Know the number of minutes in an hour and the number of hours in a day.	- Tell and write the time from an analogue clock, including using Roman numerals from I to XII - Tell and write the time on 12-hour and 24-hour clocks - Estimate and read time with increasing accuracy to the nearest minute - Record and compare time in seconds, minutes and hours; - Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, midnight, midday, noon - Know the number of seconds in a minute	- Read, write and convert time between analogue and digital 12- and 24-hour clocks - Begin to solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	- Begin to solve problems involving converting between units of time e.g. hours to minutes; minutes to seconds; years to months; weeks to days. - Begin to use, read, write, convert between standard units of time from a smaller unit of measure to a larger unit and vice versa	- Solve problems involving converting between units of time e.g. hours to minutes; minutes to seconds; years to months; weeks to days. - Use, read, write, convert between standard units of time from a smaller unit of measure to a larger unit and vice versa

	hands on a clock face to show these times.		- Know the number of days in each month, year and leap year - Compare durations of events [e.g. calculate the time taken by particular events].			
Time Days of the week: Monday, Tuesday, etc. Seasons Day, weekend, morning, afternoon, bedtime, dinnertime, playtime	Measure, time, minutes, hours, minute hand, hour hand, o'clock, quarter past, half past, quarter to, clock, clock face, numbers 1-12, longer, shorter, compare, Today, yesterday, tomorrow	time, clock, minute hand, hour hand, big hand, small hand, hour, minute, second, intervals, past, to, o'clock, half past, quarter past, quarter to, before, after, next, last, earlier, later, morning, afternoon, evening, midnight, hour, days, duration, days of the week, how long is..	analogue, digital, time, clock, minute hand, hour hand, big hand, small hand, hour, minute, second, intervals, past, to, o'clock, half past, quarter past, quarter to, before, after, next, last, earlier, later, morning, afternoon, evening, midnight, hour, days, duration, days of the week, how long is..	week, weekend, fortnight, month, year, leap year, century, millennium, , how often?, always, never, often, sometimes, usually, once, twice, hour, o'clock, half past, quarter past, quarter to, 5, 10, 15 ... minutes past, a.m., p.m., clock, clock face, watch, hands, digital/analogue clock/watch, timer, hour hand, minute hand, hours, minutes, seconds, timetable, arrive, depart, Roman numerals, 12-hour clock time, 24-hour clock time.	fortnight, month, year, leap year, century, millennium, today, yesterday, tomorrow, calendar, date, early, late, earliest, latest, takes longer, takes less time, how long ago?, how long will it be to ...? how long will it take to ...? how often?, o'clock, half past, quarter past, quarter to, minutes past, a.m., p.m., digital/analogue clock/watch, hour hand, minute hand, hours, minutes, seconds, timetable, arrive, depart, 12-hour clock time, 24-hour clock time	fortnight, month, year, leap year, century, millennium, today, yesterday, tomorrow, calendar, date, early, late, earliest, latest, takes longer, takes less time, how long ago?, how long will it be to ...? how long will it take to ...? how often?, o'clock, half past, quarter past, quarter to, minutes past, a.m., p.m., digital/analogue, timetable, arrive, depart, Roman numerals 12-hour clock time, 24-hour clock time

Measures - Temperature

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	recognise the concept of temperature in a practical context – use related vocabulary hot, cold, freezing	Choose and use appropriate standard units to estimate temperature (°C) to the nearest appropriate unit using thermometers		Add in additional unit on temperature here which will link with the science unit changing materials		Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
	temperature, hot, cold, cool, warm	temperature, hot, cold, cool, warm, thermometer, degree Celsius		temperature, hot, cold, cool, warm, boiling, freezing, thermometer, degree Celsius		temperature, hot, cold, cool, warm, boiling, freezing, thermometer, degree Celsius, positive, negative, minus

Geometry – Properties of 2D and 3D Shape

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
2D Shape - Recognise and name common 2-D (e.g. rectangles, squares, circles and triangles) - Sort and make pictures and patterns with 2D shapes 3D shape - Build and sort common 3-D shapes, (e.g. cuboids, cubes, pyramids spheres)	2D Shape - Recognise and name common 2-D (e.g. rectangles, squares, circles and triangles) 3D shape - Recognise and name common 3-D shapes, (e.g. cuboids, cubes, pyramids spheres)	2D Shape - Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line - Identify 2-D shapes on the surface of 3-D shapes (e.g., circle on cylinder, triangle on a pyramid) - Compare and sort common 2-D shapes and everyday objects. 3D shape - Recognise and name common 3D shapes (e.g. cuboids, cubes, pyramids and sphere) - Compare and sort common 2-D and 3-D shapes and everyday objects.	2D shape - Draw 2-D shapes 3D shape - Make 3-D shapes using modelling materials; - Recognise 3-D shapes in different orientations and describe them	2D shape - Compare and classify geometric shapes including quadrilaterals and triangles based on their properties and sizes - Identify lines of symmetry in 2-D shapes presented in different orientations 3D shape - Name and describe 3D shapes in different orientations	2D shape - distinguish between regular and irregular polygons based on reasoning about equal sides and angles. - use properties of rectangles to deduce related facts and find missing lengths, angles - use properties of rectangles to deduce related facts and find missing lengths, angles 3D shape - Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	2D shape - Draw 2-D shapes using given dimensions and angles - Compare and classify geometric shapes based on their properties and sizes - Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius 3D shape - Recognise, describe and build simple 3-D shapes, including making nets
Group, sort cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square Shape Flat, curved, traight, round Solid	2D shape, rectangle, square, circle, triangle, hexagon, octagon, flat 3d shape, cube, cuboid, sphere, pyramid, square based pyramid, solid	2D shape, rectangle, square, circle, triangle, quadrilateral, hexagon, pentagon, side, corner, curved, long, short, 3d shape, cube, cuboid, sphere, pyramid, square based pyramid	2D shape, rectangle, square, circle, triangle, quadrilateral, hexagon, pentagon, heptagon, octagon, side, corner, curved, long, short, right angle, symmetry, parallelogram, kite, rhombus, net 3d shape, cube, cuboid, sphere, cone, pyramid, square based pyramid, cylinder, face, edge, vertices	2D shape, flat, curved, straight, round, rectangle, square, circle, triangle, quadrilateral, hexagon, pentagon, heptagon, octagon, side, corner, curved, long, short, right angle, symmetry, regular, irregular, parallelogram, kite, rhombus, net 3d shape, cube, cuboid, sphere, cone, pyramid, square based pyramid, cylinder, face, edge, vertices	shape, pattern, flat, line, curved, straight, round, hollow, solid, sort, make, build, construct, draw, sketch, perimeter, surface, angle, symmetry, regular, irregular, two-dimensional, rectilinear circle, equilateral triangle, isosceles triangle, scalene triangle, pentagon, hexagon, heptagon, octagon, quadrilateral, parallelogram, rhombus, trapezium, polygon, right -angled, parallel, perpendicular, three-dimensional, face, edge, vertices, cube, cuboid, pyramid, sphere, spherical, cone, cylinder, cylindrical prism, triangular prism	three-dimensional, face, edge, vertex, vertices, cube, cuboid, pyramid, sphere, cylinder, cylindrical prism, triangular prism, net, parallelogram, rhombus, trapezium, kite, polygon, right-angled, parallel, perpendicular, two-dimensional, corner, rectangle (including square), rectangular, rectilinear, circle, triangle, equilateral triangle, isosceles triangle, scalene triangle, pentagon, hexagon, heptagon, octagon, quadrilateral, construct, draw, centre, radius, diameter, circumference, net, right-angled, congruent, intersecting, base, square-based, reflect, reflection, regular, irregular, shape, pattern

Geometry – Properties of Shape - Angles and Lines

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			- Recognise angles as a property of shape or a description of a turn - Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; - identify whether angles are greater than or less than a right angle - Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	- Identify acute and obtuse angles - compare and order angles up to 2 right angles by size - Identify lines of symmetry in 2-D shapes presented in different orientations - Complete a simple symmetric figure with respect to a specific line of symmetry.	- Know angles are measured in degrees: - estimate, compare acute, obtuse and reflex angles - Draw given angles, and measure them in degrees° Identify: - angles at a point and one whole turn (total 360°) - angles at a point on a straight line and a turn (total 180°) - other multiples of 90°	- Find unknown angles in any triangles, quadrilaterals, and regular polygons - Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
			line, straight, turn, clockwise, anticlockwise, angle, degree, right angle, acute angle, obtuse angle, greater, smaller, straight line, vertical, horizontal, parallel, perpendicular, ruler,	angle, is a greater/smaller angle than, degree, right angle, acute angle, obtuse angle, reflection, straight line, ruler, angle measurer, compass, size, bigger, larger, smaller, symmetry, symmetrical, symmetrical pattern, line symmetry, reflect, reflection, pattern, repeating pattern, match, regular, irregular.	angle, is a greater/smaller angle than, degree, right angle, acute angle, obtuse angle, reflection, straight line, ruler, set square, angle measurer, compass, size, bigger, larger, smaller, symmetry, symmetrical, symmetrical pattern, line symmetry, reflect, reflection, pattern, repeating pattern, match, regular, irregular.	angle, degree, right angle, acute angle, obtuse angle, reflex angle, straight line, ruler, angle measurer, compass, protractor, circumference, diameter, centre, radius,

Geometry – Position and Direction

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
- sequence familiar events in chronological order - use a range of vocabulary to describe when things happen - use vocabulary to describe when things happen during the day – morning, afternoon and night - say the days of the week in order and begin to use vocabulary such as	- Sequence familiar events in chronological order - use language to describe when things happen [e.g. before and after, next, first, today, tomorrow, morning, afternoon and evening] - Recognise and use language relating to dates (know the days of the week, weeks, months of the year and years)	- Order and arrange combinations of mathematical objects in patterns and sequences - Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line - Distinguish between rotation as a turn and in terms of right angles for quarter, half and three-quarters		- Describe positions on a 2-D grid as coordinates in the first quadrant - Describe movements between positions as translations of a given unit to the left/right and up/down - Plot specified points and draw sides to complete a given polygon	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language and know that the shape has not changed.	- Describe positions on the full coordinate grid (all four quadrants) - Draw and translate simple shapes on the coordinate plane, and reflect them in the axes

yesterday, today and tomorrow	Tell the time on an analogue clock face to the hour and half past the hour and draw the hands on a clock face to show these times.	quarter turns (clockwise and anti-clockwise).				
before, after, next, first, last, yesterday, today,, tomorrow, morning, afternoon, day, night, forwards, backwards	Position, direction, movement, whole turn, quarter turn, three quarter turn, whole turn, clockwise, move, shape, left, right, forwards, backwards, change.	Movement, position, direction, left, right, forwards, 'backwards' full turn, half turn, quarter turn, three-quarter turn, clockwise and anti-clockwise.		position, over, under, underneath, above, below, top, bottom, side, on, in, outside, inside, around, in front, behind, front, back, beside, next to, opposite, apart, between, middle, edge, centre, corner, direction, journey, route, left, right, up, down, higher, lower, forwards, backwards, sideways, across, next to, close, near, far, along, through, to, from, towards, away from, clockwise, anticlockwise, compass point, north, south, east, west, N, S, E, W, north-east, north-west, south-east, south-west, NE, NW, SE, SW, horizontal, vertical, diagonal, translate, translation.	Position, left, right, up, down, across, horizontal, vertical, diagonal, translate, translation, coordinate, movement slide, x axis, y axis, plotting, vertices bigger, larger, smaller, symmetry, symmetrical, symmetrical pattern, line of symmetry, reflect, reflection, axis of symmetry, reflective symmetry, pattern, repeating pattern, parallel	Position, left, right, up, down, across, horizontal, vertical, diagonal, translate, translation, coordinate, movement slide, x axis, y axis, plotting, vertices bigger, larger, smaller, symmetry, symmetrical, symmetrical pattern, line of symmetry, reflect, reflection, axis of symmetry, reflective symmetry, pattern, repeating pattern, parallel

Statistics

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Present and Interpret - Collect information in simple tally charts - Interpret and construct simple pictograms, tally charts, block diagrams and tables Solve Problems - Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity - Ask and answer questions about totalling and comparing categorical data.	Present and Interpret - Interpret and present data using scaled bar charts, tally charts, pictograms and tables Solve Problems - Solve 1 and 2 step questions using info in scaled bar charts and pictograms and frequency tables.	Present and Interpret - Interpret and present discrete and continuous data using appropriate graphical methods including bar charts and time graphs Solve Problems - Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	Present and Interpret - Complete, read and interpret information in tables, including timetables and line graphs Solve Problems - Solve comparison, sum, difference problems using information presented in timetables and line graph	Present and Interpret - Interpret and construct pie charts and line graphs and use these to solve problems Solve Problems - Calculate and interpret the mean as an average.

		Count, tally, sort, vote, graph, block graph, pictogram, represent, group, set, list, table Label, title, most popular, most common, least popular, least common	count, tally, sort, vote, graph, block graph, pictogram, represent, group, table, chart, bar chart, frequency table, label, title, axis, axes, diagram, most popular, most common, least popular, least common.	count, tally, sort, vote, survey, questionnaire, data, graph, block graph, pictogram, represent, group, set, list, table, chart, bar chart, frequency table, time graph. label, title, axis, axes, diagram, most popular, most common, least popular, least common	tally, sort, vote, survey, questionnaire, data, database, graph, block graph, pictogram, represent, group, set, list, table, chart, bar chart, frequency, table, bar, line, chart, Carroll diagram, line graph, label, title, axis, axes, diagram, most popular, most common, least popular, least common, maximum/minimum, value, outcome	tally, sort, vote, survey, questionnaire, data, database, graph, pictogram, represent, group, set, list, table, chart, bar chart, frequency table, bar/line chart, Carroll diagram, line graph, negative, difference, pie chart, label, title, axis, axes, diagram most popular, most common, least popular, least common, maximum/minimum, value, outcome, mean, statistics
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