



Hennock Community Primary School Maths Curriculum

Our Curriculum statements are designed to be used as a supportive tool to plan teaching and learning across our school. The key skills are derived from the National Curriculum and spilt into individual year groups to support a progressive approach and mixed age classes.

Mathematics at The Link Academy Trust

Our core purpose is to equip all pupils with the skills and confidence to develop their mathematical fluency, problem solving and reasoning in preparation for assessment (including statutory testing), further education and life beyond.

Children are encouraged to develop curiosity about number and embrace the mathematics that surrounds them each day in a variety of contexts that have meaningful connections to real life, including links with other curriculum subjects. We offer opportunities for children to develop understanding and mathematical articulation through a cohesive progression of learning across the school in order to maximise their depth of learning. Children should be able to demonstrate a deep conceptual understanding of an area of maths and build on this over time, as well as establishing a secure knowledge of key number facts to allow them to become efficient mathematicians.

Mathematics at The Link Academy Trust is an opportunity for pupils to take risks, challenge themselves and work both independently and collaboratively towards solving problems. Children will develop concise and accurate vocabulary in mathematics through consistent modelling by teachers and high expectations for the pupils.

We encourage our pupils to use and develop their metacognitive skills and resilience, which is evident throughout mathematics in The Link Academy Trust. Alongside this, we promote growth mindset and ensure all children feel empowered to achieve. This supports our children to develop self-confidence when faced with mathematical challenges, allowing them to embrace mistakes as part of the learning process and in turn value the importance of effort.

We strive to accelerate progress and improve outcomes for all of our pupils each year.

Maths organisation

Maths specific vocabulary	Planning	Lesson structure and class management	Working walls and resources
Rich maths vocabulary is modelled and discussed by class teachers and pupils and stem sentences are used to support children to articulate their thinking. The expectations are high for children to consistently use	Maths mastery is a core driver of our teaching and learning. The progressive curriculum plan is mapped out across all phases ensuring continuity and a calculation policy is used to ensure a consistent	The focus on 'maths talk' is evident with talk partners, talk trios or whole-class discussions in response to frequent questioning throughout all maths lessons. Teachers will	Each class has a mathematics working wall to support learning in mathematics. It is a public display of the learning process which evolves as each day progresses to support children's independent work.

<p>accurate, concise and age-appropriate mathematical vocabulary during discussions and written reasoning. By the time Year 6 pupils undertake SATs, children should have a clear understanding of KS1 and KS2 maths vocabulary to eliminate potential barriers to understanding questions. Teachers use regular questioning and activities around maths vocabulary to address misconceptions and dual meanings. The vocabulary for the current topic is displayed on the Maths Working Wall, alongside examples of children's work, images, numbers and symbols for the children to refer to and to support their learning. The focus on 'maths talk' is evident with talk partners, talk trios or whole-class discussions in response to frequent effective questioning throughout all maths lessons. Responses are expected in full sentences using mathematical vocabulary and stem sentences are regularly used to encourage this. By giving the children these opportunities to expand their thinking and share their reasoning, they will develop their conceptual understanding and make connections between number facts.</p>	<p>approach. Short term planning makes use of the White Rose Maths Hub materials, our own school calculation policy, NCETM, NRICH and other fluency, problem solving and reasoning tasks adapted from a variety of other sources. Elicitation tasks are carefully designed by the teachers at the start of every unit to inform the planning cycle. Common misconceptions are identified and planned for. White Rose assessment tasks are used at the end of a unit to inform the teacher of children's progress and to identify any areas of weakness. The Assessment for learning is used to identify and plan for any additional input on individual/class areas of weakness. Lessons planned in all year groups adopt a Concrete-Pictorial-Abstract (CPA) approach to engage and add depth of understanding for all learners. Our calculation policy exemplifies the links between the concrete, pictorial and abstract aspects of each operation. The planning ensures that all learners are challenged at an appropriate level and support is allocated accordingly. Depending on class structure, as mixed-age classes dictate, some year groups may receive separate lesson inputs by the Teacher and/or HLTA and some will share lesson inputs, but all will have support and challenge incorporated into each lesson.</p>	<p>challenge understanding through regular, investigative questioning throughout.</p> <p>Previous learning is revisited through flashback questions which are designed to revisit and reinforce prior learning to help children retain mathematical concepts over time. New content is taught through a range of lesson structures to best support children in their learning journey, which progresses into supported and independent practise for children to secure their new skills. Teachers use differentiated questioning to elicit feedback from all students to expose and address any misconceptions in learning. Where these misconceptions are seen, they are readdressed through supported practice to enable all children to succeed. Concrete and pictorial representations of mathematics are carefully chosen, as appropriate, to help build procedural and conceptual knowledge. Additional models, visuals and manipulatives are used to scaffold children who may struggle to grasp concepts and 'Dive Deeper' challenges are provided for those who grasp them quickly. These focus on breadth and depth of understanding and the children are expected to apply their knowledge in a range of challenging scenarios.</p>	<p>Children know where maths resources are kept and are encouraged to independently use them to assist their own learning. A range of maths scaffolding resources are used by individuals identified as requiring them.</p>
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<p>AFL, Self-editing & feedback</p> <p>Pupils are encouraged to correct their mistakes; children will typically respond to a teacher’s feedback using a blue pen or verbally as part of a discussion. We use CAPED as a self-editing and feedback model. This takes place before, during and after a maths lesson.</p> <p>C – Check A – Another Way P – Prove It E – Explain (pupils to use reasoning and mathematical language to explain their maths) D – Draw (pupils to a method of ‘drawing’ their maths. Bar modelling, number line etc.)</p> <p>White Rose assessment tasks are used at the end of a unit to inform the teacher of children’s progress within a specific unit and PUMA papers will be used termly to support teacher assessment and to identify areas of strengths and weaknesses.</p>	<p>Times Tables</p> <p>We follow a clear, structured progression for teaching times tables across the school, with milestones identified from Reception to Year 6.</p> <p>Weekly practice is built into lessons and home learning. Each year group builds on prior knowledge using targeted resources like the Maths Hub Booklets, ensuring pupils master key facts before moving on.</p> <p>By Year 4, all children are fluent in tables up to 12×12, with Years 5 and 6 extending this further.</p> <p>Where children need further support, we use precision teaching and increased practise time to aid the children with mastery.</p>	<p>SEND, pre-teaching and post-teaching</p> <p>Some individuals are specifically supported by additional adults, resources or differentiated activities in maths. Learners who have not kept up with the rest of the class during the lesson also have an opportunity for pre-teaching/ post-teaching sessions with their teacher or TA later that day or the following morning. Intervention for pupils working significantly below age-related expectation is detailed in Class Provision Maps, such as number-focussed group work.</p>	<p>Calculation policy</p> <p>The calculation policy (see separate document) is a guide for teaching the progression of calculation strategies throughout primary education. Whilst abstract strategies are predominantly used in UKS2, all children are encouraged to use concrete and pictorial representations to secure their understanding.</p>
<p>SEND Provision</p> <p>As part of our inclusive approach, we ensure all learners access challenging and meaningful learning through ordinarily available provision tailored to each classroom. For pupils requiring additional support, we make further adjustments to meet individual needs.</p> <p>Beyond our core provision, we use targeted interventions such as Number Stacks, precision teaching, and Doodle Maths. This list is not exhaustive—other evidence-based strategies are deployed as appropriate to support progress and engagement.</p>			

In order to assess impact - a guide

Children will develop 'maths capital' - confidence, understanding and enjoyment in mathematics along with a comprehensive set of problem-solving skills and strategies to take with them to the next stage of their education. They will be engaged, resilient, challenged and able to quickly recall facts and techniques in order to maximise their depth of learning.

They will use mathematics effectively as a tool in a wide variety of situations and will be able to present a justification or argument relating to a problem using mathematical language. They will understand the relevance of what they are learning in relation to real world concepts and develop a sense of curiosity about the subject.

Our children will develop a confident recall of multiplication tables to 12x12 by the end of year 4 and our attainment data will exceed national averages.

Assessment - a guide

KS1	Years 3-5	Year 6
Trust wide end-of-Key Stage tests for Year 2	Statutory Multiplication Check for Year 4	Statutory tests for Year 6 (SATs)
SIMs – in-house data and progress tracking	SIMs – in-house data and progress tracking	SIMs – in-house data and progress tracking
Teacher assessment - observations of maths behaviour and discussion	Teacher assessment - observations of maths behaviour and discussion	Teacher assessment - observations of maths behaviour and discussion
Maths books	Maths books	Maths books
Written responses to feedback	Written responses to feedback	Written responses to feedback
TTRS	White Rose end-of-unit assessments	White Rose end-of-unit assessments
Numbots	PUMA termly assessments	PUMA termly assessments
Doodle	Half termly pre and post arithmetic assessments.	TTRS
White Rose end-of-unit assessments	TTRS	Half termly pre and post arithmetic assessments.
Half termly pre and post arithmetic assessments.	Numbots	
	Doodle	

Vocabulary

Children's command of vocabulary is fundamental to learning and progress across the curriculum. Vocabulary is developed actively, building systematically on pupil's current knowledge and deepening their understanding of etymology and morphology (word origins and structures) to increase their store of words. Simultaneously, pupils make links between known and new vocabulary, and discuss and apply shades of meaning. In this way, children expand the vocabulary choices that are available to them. It is essential to introduce technical vocabulary which define each curriculum subject.

Vocabulary development is underpinned by an oracy culture and a tiered approach. High value is placed on the conscious, purposeful selection of well-chosen vocabulary and appropriate sentence structure to enrich access to learning and feed into written work across the curriculum.

New maths vocabulary for year 1

Number and place value	Addition and subtraction	Multiplication and division	Measure	Geometry (position and direction)	Geometry (properties of shape)	Fractions	General/problem solving
Number	Number bonds, number line	Odd, even	Full, half full, empty	Position	Group, sort	Whole	Listen, join in
Zero, one, two, three to twenty, and beyond	Add, more, plus, make, sum, total, altogether	Count in twos, threes, fives	Holds	Over, under, underneath, above, below, top, bottom, side	Cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square	Equal parts, four equal parts	Say, think, imagine, remember
None	Inverse	Count in tens (forwards from/backwards from)	Container	on, in, outside, inside	Shape	One half, two halves	Start from, start with, start at
Count (on/up/to/from/down)	Double, near double	How many times?	Weigh, weighs, balances	around, in front, behind	Flat, curved, straight, round	A quarter, two quarters	Look at, point to
Before, after	Half, halve	Lots of, groups of	Heavy, heavier, heaviest, light, lighter, lightest	Front, back	Hollow, solid		Put, place, fit
More, less, many, few, fewer, least, fewest, smallest, greater, lesser	Equals, is the same as (including equals sign)	Once, twice, three times, five times	Scales	Before, after	Corner (point, pointed)		Arrange, rearrange
Equal to, the same as	Difference between	Multiple of, times, multiply, multiply by	Time	Beside, next to, Opposite	Face, side, edge		Change, change over
Odd, even	How many more to make..?, how	Repeated addition	Days of the week: Monday, Tuesday, etc.	Apart	Make, build, draw		Split, separate
			Seasons: spring, summer, autumn, winter	Between, middle, edge, centre			Carry on, continue, repeat, what comes next?
			Day, week, month, year, weekend	Corner			Find, choose, collect, use, make, build
			Birthday, holiday				
			Morning, afternoon, evening.				

Pair	many more is...than..?, how much more is..?	Array, row, column	night, midnight	Direction		Tell me, describe, pick out, talk about, explain, show me
Units, ones, tens		Double, halve	Bedtime, dinnertime, playtime	Journey		
Ten more/less	Subtract, take away, minus	Share, share equally	Today, yesterday, tomorrow	Left, right, up, down, forwards, backwards, sideways		Read, write, record, trace, copy, complete, finish, end
Digit		Group in pairs, threes, etc.	Before, after			
Numerals	How many fewer		Next, last	Across		Fill in, shade, colour, tick, cross, draw, draw a line between, join (up), ring, arrow
Figure(s)	is...than..?, how much less is..?	Equal groups of	Now, soon, early, late	Close, far, near		
Compare		Divide, divided by, left, left over	Quick, quicker, quickest, quickly, fast, faster, fastest, slow, slower, slowest, slowly	Along, through		
(In) order/a different order			Old, older, oldest, new, newer, newest	To, from, towards, away from		Cost
Size				Movement		Count, work out, answer, check same
Value			Takes longer, takes less time	Slide, roll, turn, whole turn, half turn		number(s)/different number(s)/missing number(s)
Between, halfway between			Hour, o'clock, half past	Stretch, bend		Number facts, number line, number track, number square, number cards
Above, below			Clock, watch, hands			Abacus, counters, cubes, blocks, rods, die, dice, dominoes, pegs, peg board
			How long ago?, how long will it be to...?, how long will it take to...?, how often?			Same way, different
			Always, never, often, sometimes, usually			
			Once, twice			
			First, second, third, etc.			
			Estimate, close to, about the			

			<p>same as, just over, just under</p> <p>Too many, too few, not enough, enough</p> <p>Length, width, height, depth</p> <p>Long, longer, longest, short, shorter shortest, tall, taller, tallest, high, higher, highest</p> <p>Low, wide, narrow, deep, shallow, thick, thin</p> <p>Far, near, close</p> <p>Metre, ruler, metre stick</p> <p>Money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change, dear(er), costs more, costs less, cheaper, costs the same as</p> <p>How much?, how many?</p> <p>Total</p>				<p>way, best way, another way</p> <p>In order, in a different order</p> <p>Not all, every, each</p>
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New maths vocabulary for year 2

Number and place value	Measure	Geometry (position and direction)	Geometry (properties of shape)	Fractions	Data/statistics	General/problem solving
Numbers to one hundred Hundreds Partition, recombine Hundred more/less	Quarter past/to m/km, g/kg, ml/l Temperature (degrees)	Rotation Clockwise, anticlockwise Straight line Ninety degree turn, right angle	Size Bigger, larger, smaller Symmetrical, line of symmetry Fold Match Mirror line, reflection Pattern, repeating pattern	Three quarters, one third, a third Equivalence, equivalent	Count, tally, sort Vote Graph, block graph, pictogram, Represent Group, set, list, table Label, title Most popular, most common, least popular, least common	Predict Describe the pattern, describe the rule Find, find all, find different Investigate

New maths vocabulary for year 3

Number and place value	Addition and subtraction	Multiplication and division	Measure	Geometry (position and direction)	Geometry (properties of shape)	Fractions	Data/statistics
Numbers to one thousand	Column addition and subtraction	Product Multiples of four, eight, fifty and one hundred Scale up	Leap year Twelve-hour/twenty-four-hour clock Roman numerals I to XIII	Greater/less than ninety degrees Orientation (same orientation, different orientation)	Horizontal, vertical, perpendicular and parallel lines	Numerator, denominator Unit fraction, non-unit fraction Compare and order Tenths	Chart, bar chart, frequency table, Carroll diagram, Venn diagram Axis, axes Diagram

New maths vocabulary for year 4

Number and place value	Multiplication and division	Measure	Geometry (position and direction)	Geometry (properties of shape)	Fractions and decimals	Data/statistics
Tenths, hundredths Decimal (places) Round (to nearest) Thousand more/less than Negative integers Count through zero Roman numerals (I to C)	Multiplication facts (up to 12x12) Division facts Inverse Derive	Convert	Coordinates Translation Quadrant x-axis, y-axis Perimeter and area	Quadrilaterals Triangles Right angle, acute and obtuse angles	Equivalent decimals and fractions	Continuous data Line graph

New maths vocabulary for year 5

Number and place value	Addition and subtraction	Multiplication and division	Measure	Geometry (position and direction)	Geometry (properties of shape)	Fractions, decimals and percentages
Powers of 10	Efficient written method	Factor pairs Composite numbers, prime number, prime factors, square number, cubed number Formal written method	Volume Imperial units, metric units	Reflex angle Dimensions	Regular and irregular Polygons	Proper fractions, improper fractions, mixed numbers Percentage Half, quarter, fifth, two fifths, four fifths Ratio, proportion

New maths vocabulary for year 6

Number and place value	Addition and subtraction	Multiplication and division	Geometry (position and direction)	Geometry (properties of shape)	Fractions, decimals and percentages	Algebra	Data/statistics
Numbers to ten million	Order of operations	Order of operations Common factors, common multiples	Four quadrants (for coordinates)	Vertically opposite (angles) Circumference, radius, diameter	Degree of accuracy Simplify	Linear number sequence Substitute Variables Symbol Known values	Mean Pie chart Construct

EYFS

Counting and recognising numbers	Adding and subtracting	Measures, shape and space
COUNTING number zero, one, two, three... to twenty and beyond zero, ten, twenty... one hundred none how many...? count, count (up) to count on (from, to) count back (from, to) count in ones, twos... tens... more, less, many, few odd, even every other how many times? pattern, pair guess how many, estimate nearly, close to,	add, more, and make, sum, total altogether score double one more, two more, ten more... how many more to make... ? how many more is... than...? take (away), leave how many are left/left over? how many have gone? one less, two less... ten less... how many fewer is... than...? difference between is the same as	MEASURES (GENERAL) measure size compare guess, estimate enough, not enough too much, too little too many, too few nearly, close to, about the same as just over, just under

<p>about the same as just over, just under too many, too few, enough, not enough</p> <p>COMPARING AND ORDERING NUMBERS</p> <p>the same number as, as many as Of two objects/amounts: greater, more, larger, bigger less, fewer, smaller Of three or more objects/amounts: greatest, most, biggest, largest least, fewest, smallest one more, ten more one less, ten less compare order size first, second, third... tenth last, last but one before, after next between above, below</p>		LENGTH
	Solving problems	length, width, height, depth long, short, tall high, low wide, narrow deep, shallow thick, thin longer, shorter, taller, higher... and so on longest, shortest, tallest, highest... and so on far, near, close
	<p>REASONING ABOUT NUMBERS OR SHAPES</p> <p>pattern puzzle answer right, wrong what could we try next? how did you work it out? count, sort group, set match same, different list</p> <p>PROBLEMS INVOLVING 'REAL LIFE' OR MONEY</p> <p>compare double half, halve pair count out, share out left, left over money coin penny, pence, pound price cost buy sell spend, spent pay change dear, costs more cheap, costs less, cheaper costs the same as how much...? how many...? total</p>	<p>MASS</p> <p>weigh, weighs, balances heavy/light, heavier/lighter, heaviest/lightest balance, scales, weight</p> <p>CAPACITY</p> <p>full half full empty holds container</p> <p>TIME</p> <p>time days of the week: Monday, Tuesday... day, week birthday, holiday morning, afternoon, evening, night bedtime, dinnertime, playtime today, yesterday, tomorrow before, after next, last now, soon, early, late quick, quicker, quickest, quickly slow, slower, slowest, slowly old, older, oldest new, newer, newest takes longer, takes less time hour, o'clock clock, watch, hands</p> <p>POSITION, DIRECTION AND MOVEMENT</p> <p>position over, under above, below top, bottom, side on, in outside, inside around in front, behind front, back before, after beside, next to opposite apart between middle, edge corner direction left, right up, down forwards, backwards, sideways across close, far, near along through to, from, towards, away from movement slide roll turn stretch, bend, tick, cross draw draw a line between join (up) ring cost count work out answer check</p>
EXPLORING PATTERNS, SHAPE AND SPACE	Instructions	General

shape, pattern flat curved, straight round hollow, solid corner face, side, edge, end sort make, build, draw 3D SHAPES cube pyramid sphere cone 2D SHAPES circle triangle square rectangle star PATTERNS AND SYMMETRY size bigger, larger, smaller symmetrical pattern repeating pattern match	listen join in say think imagine remember start from start with start at look at point to show me put, place fit arrange rearrange change, change over split separate carry on, continue repeat what comes next? find choose collect use make build tell me describe pick out talk about explain show me read write trace copy complete finish, end fill in shade colour	same number/s different number/s missing number/s number facts number line, number track number square number cards counters, cubes, blocks, rods die, dice dominoes pegs, peg board same way, different way best way, another way in order, in a different order not all, every, each
Year 1		
Numbers and the number system	Calculations	Solving problems
COUNTING, PROPERTIES OF NUMBERS AND NUMBER SEQUENCES number zero, one, two, three... to twenty and beyond zero, ten, twenty... one hundred none how many...? count, count (up) to count on (from, to) count back (from, to) count in ones, twos... tens... more, less, many, few odd, even every other how many times? pattern, pair PLACE VALUE AND ORDERING units, ones tens exchange digit 'teens' number the same number as, as many as equal to Of two objects/amounts: greater, more, larger, bigger less, fewer, smaller Of three or more objects/amounts: greatest, most, biggest, largest least, fewest, smallest one more, ten more one less, ten less compare order size first, second, third... tenth, eleventh... twentieth last, last but one before, after next between, half- way between above, below ESTIMATING guess how many, estimate nearly, roughly, close to about the same as just over, just under too many, too few, enough, not enough	ADDITION AND SUBTRACTION +, add, more, plus make, sum, total altogether score double, near double one more, two more... ten more how many more to make...? how many more is... than...? how much more is...? -, subtract, take (away), minus leave 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 half, halve =, equals, sign, is the same as Organising and using data count, sort, vote group, set list same, different table Measures, shape and space MEASURES (GENERAL) measure size compare guess, estimate enough, not enough too much, too little too many, too few nearly, roughly, close to, about the same as just over, just under LENGTH length, width, height, depth long, short, tall high, low wide, narrow deep, shallow thick, thin longer, shorter, taller, higher... and so on	MAKING DECISIONS AND REASONING pattern puzzle answer right, wrong what could we try next? how did you work it out? count out, share out, left, left over number sentence sign, operation MONEY money coin penny, pence, pound price cost buy sell spend, spent pay change dear, costs more cheap, costs less, cheaper costs the same as how much...? how many...? Total TIME time days of the week: Monday, Tuesday... seasons: spring, summer, autumn, winter day, week, month, year weekend, birthday, holiday morning, afternoon, evening night, midnight bedtime, dinnertime, playtime today, yesterday, tomorrow before, after next, last now, soon, early, late quick, quicker, quickest, quickly fast, faster, fastest slow, slower, slowest, slowly old, older, oldest new, newer, newest takes longer, takes less time hour, o'clock, half past clock, watch, hands how long ago? how long will it be to...? how long will it
Instructions		

<p>listen join in say think imagine remember start from start with start at look at point to show me put, place fit arrange rearrange change, change over split separate carry on, continue repeat what comes next? find choose collect use make build tell me describe pick out talk about explain show me read write record trace copy complete finish, end fill in shade colour tick, cross draw draw a line between join (up) ring arrow</p>	<p>longest, shortest, tallest, highest... and so on far, near, close metre ruler, metre stick</p> <p>MASS weigh, weighs, balances heavy/light, heavier/lighter, heaviest/lightest balance, scales, weight</p> <p>CAPACITY full half full empty holds container</p>	<p>take to...? how often? always, never, often, sometimes, usually once, twice</p> <p>SHAPE AND SPACE shape, pattern flat curved, straight round hollow, solid corner point, pointed face, side, edge, end sort make, build, draw</p> <p>3D SHAPES cube cuboid pyramid sphere cone cylinder</p> <p>2D SHAPES circle triangle square rectangle star</p>
<p>General</p> <p>same number/s different number/s missing number/s number facts number line, number track number square number cards abacus counters, cubes, blocks, rods die, dice dominoes pegs, peg board same way, different way best way, another way in order, in a different order not all, every, each</p>	<p>PATTERNS AND SYMMETRY size bigger, larger, smaller symmetrical pattern repeating pattern match</p> <p>POSITION, DIRECTION AND MOVEMENT position over, under, underneath above, below top, bottom, side on, in outside, inside around in front, behind front, back before, after beside, next to opposite apart between middle, edge centre corner direction journey left, right up, down forwards, backwards, sideways across close, far, near along through to, from, towards, away from movement slide roll turn, whole turn, half turn stretch, bend, cost count work out answer check</p>	
<p>Year 2</p>		
<p>Numbers and the number system</p> <p>COUNTING, PROPERTIES OF NUMBERS AND NUMBER SEQUENCES number zero, one, two, three... to twenty and beyond zero, ten, twenty... one hundred zero, one hundred, two hundred... one thousand none how many...? count, count (up) to count on (from, to) count back (from, to) count in ones, twos, threes, fours, fives... count in tens more, less, many, few tally odd, even every other how many times? multiple of sequence continue predict pattern, pair, rule</p>	<p>Calculations</p> <p>ADDITION AND SUBTRACTION +, add, addition, more, plus make, sum, total altogether score 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...? -, subtract, subtraction, take (away), minus leave, how many are left/left over? one less, two less... ten less... one hundred less how many fewer is... than...? how much less is...? difference between half, halve =, equals, sign, is the same as tens boundary</p>	<p>Solving problems</p> <p>MAKING DECISIONS AND REASONING pattern, puzzle calculate, calculation mental calculation jotting answer right, correct, wrong what could we try next? how did you work it out? number sentence sign, operation, symbol</p> <p>MONEY money coin penny, pence, pound (£) price, cost buy, bought, sell, sold spend, spent pay change dear, costs more cheap, costs less, cheaper how much...? how many...? Total</p>

<p>PLACE VALUE AND ORDERING units, ones tens, hundreds digit one-, two- or three-digit number 'teens' number place, place value stands for, represents exchange the same number as, as many as equal to Of two objects/amounts: greater, more, larger, bigger less, fewer, smaller Of three or more objects/amounts: greatest, most, biggest, largest least, fewest, smallest one more, ten more one less, ten less compare order size first, second, third... tenth... twentieth twenty-first, twenty-second... last, last but one before, after next between, half-way between above, below</p> <p>ESTIMATING guess how many, estimate nearly, roughly, close to about the same as just over, just under exact, exactly too many, too few, enough, not enough round, nearest, round to the nearest ten</p> <p>FRACTIONS part, equal parts fraction one whole one half, two halves one quarter, two... three... four quarters</p>	<p>MULTIPLICATION AND DIVISION lots of, groups of \times, times, multiply, multiplied by multiple of once, twice, three times... ten times... times as (big, long, wide... and so on) repeated addition array row, column double, halve share, share equally one each, two each, three each... group in pairs, threes... tens equal groups of \div, divide, divided by, divided into left, left over</p> <p>Measures, shape and space</p> <p>MEASURES (GENERAL) measure size compare measuring scale guess, estimate enough, not enough too much, too little too many, too few nearly, roughly, about, close to, about the same as just over, just under</p> <p>LENGTH length, width, height, depth long, short, tall, high, low wide, narrow, deep, shallow, thick, thin longer, shorter, taller, higher... and so on longest, shortest, tallest, highest... and so on far, further, furthest, near, close metre (m), centimetre (cm) ruler, metre stick, tape measure</p> <p>MASS weigh, weighs, balances heavy/light, heavier/lighter, heaviest/lightest kilogram (kg), half-kilogram, gram (g) balance, scales, weight</p>	<p>Organising and using data count, tally, sort, vote graph, block graph, pictogram represent group, set same, different list, table label, title most popular, most common least popular, least common</p> <p>Instructions listen join in say recite think imagine remember start from start with start at look at point to show me put, place fit arrange, rearrange change, change over split separate carry on, continue repeat what comes next? predict describe the pattern describe the rule find, find all, find different investigate choose decide collect use make build tell me describe name pick out discuss talk about explain explain your method explain how you got your answer give an example of... show how you...read write record write in figures present represent trace copy complete finish, end fill in shade, colour label tick, cross draw draw a line between join (up) ring arrow cost, count, tally calculate work out solve answer check</p> <p>General same, different missing number/s number facts number pairs number bonds number line, number track number square, hundred square</p>
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	<p>CAPACITY capacity full, half full empty holds, contains litre (l), half-litre, millilitre (ml) container</p> <p>TIME time days of the week: Monday, Tuesday... months of the year: January, February... seasons: spring, summer, autumn, winter day, week, fortnight, month, year weekend, birthday, holiday morning, afternoon, evening, night, midnight bedtime, dinnertime, playtime today, yesterday, tomorrow before, after next, last now, soon, early, late quick, quicker, quickest, quickly fast, faster, fastest slow, slower, slowest, slowly old, older, oldest new, newer, newest takes longer, takes less time how long ago? how long will it be to...? how long will it take to...? hour, minute, second o'clock, half past, quarter to, quarter past clock, watch, hands digital/analogue clock/watch, timer how often? always, never, often, sometimes, usually once, twice</p> <p>SHAPE AND SPACE shape, pattern flat, curved, straight round hollow, solid corner point, pointed face, side, edge, end sort make, build, draw surface</p> <p>3D SHAPES cube cuboid pyramid sphere cone cylinder</p> <p>2D SHAPES circle, circular triangle, triangular square rectangle, rectangular star pentagon hexagon octagon</p> <p>PATTERNS AND SYMMETRY size bigger, larger, smaller symmetrical line of symmetry fold match mirror line, reflection pattern repeating pattern</p>	<p>number cards number grid abacus counters, cubes, blocks, rods die, dice dominoes pegs, peg board geo-strips same way, different way best way, another way in order, in a different order not all, every, each</p>
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	<p>POSITION, DIRECTION AND MOVEMENT</p> <p>position over, under, underneath above, below top, bottom, side on, in outside, inside around in front, behind front, back before, after beside, next to opposite apart between middle, edge centre corner direction journey, route left, right up, down higher, lower forwards, backwards, sideways across close, far, near along through to, from, towards, away from clockwise, anti-clockwise movement slide roll whole turn, half turn, quarter turn right angle straight line stretch, bend</p>	
Year 3		
Numbers and the number system	Calculations	Solving problems
<p>COUNTING, PROPERTIES OF NUMBERS AND NUMBER SEQUENCES</p> <p>number zero, one, two, three... to twenty and beyond zero, ten, twenty... one hundred zero, one hundred, two hundred... one thousand none how many...? count, count (up) to count on (from, to) count back (from, to) count in ones, twos, threes, fours, fives... count in tens, hundreds more, less, many, few tally odd, even every other how many times? multiple of sequence continue predict pattern, pair, rule relationship</p> <p>PLACE VALUE AND ORDERING</p> <p>units, ones tens, hundreds digit one-, two- or three-digit number 'teens' number place, place value stands for, represents exchange the same number as, as many as equal to Of two objects/amounts: greater, more, larger, bigger less, fewer, smaller Of three or more objects/amounts: greatest, most, biggest, largest least, fewest, smallest one more, ten more, one hundred more one less, ten less, one hundred less compare order size first, second,</p>	<p>ADDITION AND SUBTRACTION</p> <p>+, add, addition, more, plus make, sum, total altogether score 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...? –, subtract, subtraction, take (away), minus leave, how many are left/left over? one less, two less... ten less... one hundred less how many fewer is... than...? how much less is...? difference between half, halve =, equals, sign, is the same as tens boundary, hundreds boundary</p>	<p>MAKING DECISIONS AND REASONING pattern, puzzle calculate, calculation mental calculation method jotting answer right, correct, wrong what could we try next? how did you work it out? number sentence sign, operation, symbol, equation MONEY money coin, note penny, pence, pound (£) price, cost buy, bought, sell, sold spend, spent pay change dear, costs more, more/most expensive cheap, costs less, cheaper, less/least expensive how much...? how many...? total, amount value, worth</p>
	<p>MULTIPLICATION AND DIVISION</p> <p>lots of, groups of ×, times, multiply, multiplication, multiplied by multiple of, product once, twice, three times... ten times... times as (big, long, wide... and so on) repeated addition array row, column double, halve share, share equally one each, two each, three each...group in pairs, threes... tens equal groups of ÷, divide, division, divided by, divided into left, left over, remainder</p>	Handling data
		<p>count, tally, sort, vote graph, block graph, pictogram represent group, set list, chart, bar chart table, frequency table Carroll diagram, Venn diagram label, title, axis, axes diagram most popular, most common least popular, least common</p>
		Measures, shape and space
	General	<p>MEASURES (GENERAL)</p> <p>measure size compare measuring scale, division guess, estimate enough, not enough too much,</p>

<p>third... tenth... twentieth twenty-first, twenty-second... last, last but one before, after next between, half-way between above, below</p> <p>ESTIMATING guess how many, estimate nearly, roughly, close to approximate, approximately about the same as just over, just under exact, exactly too many, too few, enough, not enough round (up or down) nearest, round to the nearest ten</p> <p>FRACTIONS part, equal parts fraction one whole one half, two halves one quarter, two... three... four quarters one third, two thirds, three thirds one tenth</p>	<p>same, different missing number/s number facts, number pairs, number bonds greatest value, least value number line, number track number square, hundred square number cards number grid abacus counters, cubes, blocks, rods die, dice dominoes pegs, peg board geo-strips same way, different way best way, another way in order, in a different order not all, every, each</p>	<p>too little too many, too few nearly, roughly, about, close to, about the same as, approximately just over, just under</p> <p>LENGTH length, width, height, depth long, short, tall, high, low wide, narrow, deep, shallow, thick, thin longer, shorter, taller, higher... and so on longest, shortest, tallest, highest... and so on far, further, furthest, near, close distance apart/between, distance to... from... kilometre (km), metre (m), centimetre (cm) mile ruler, metre stick, tape measure</p> <p>MASS weigh, weighs, balances heavy/light, heavier/lighter, heaviest/lightest kilogram (kg), half-kilogram, gram (g) balance, scales, weight</p> <p>CAPACITY</p>
Instructions		

<p>listen join in say recite think imagine remember start from start with start at look at point to show me put, place fit arrange, rearrange change, change over split separate carry on, continue repeat what comes next? predict describe the pattern describe the rule find, find all, find different investigate choose decide collect use make build tell me describe name pick out discuss talk about explain explain your method explain how you got your answer give an example of... show how you... show your working read write record write in figures present represent interpret trace copy complete finish, end fill in shade, colour label tick, cross draw, sketch draw a line between join (up) ring arrow cost, count, tally calculate work out solve investigate question answer check</p>		<p>capacity full, half full empty holds, contains litre (l), half-litre, millilitre (ml) container</p> <p>TIME time days of the week: Monday, Tuesday... months of the year: January, February... seasons: spring, summer, autumn, winter day, week, fortnight, month, year, century weekend, birthday, holiday calendar, date morning, afternoon, evening, night, midnight am, pm bedtime, dinnertime, playtime today, yesterday, tomorrowbefore, after next, last now, soon, early, late, earliest, latest quick, quicker, quickest, quickly fast, faster, fastest slow, slower, slowest, slowly old, older, oldest new, newer, newest takes longer, takes less time how long ago? how long will it be to...? how long will it take to...? hour, minute, second o'clock, half past, quarter to, quarter past clock, watch, hands digital/analogue clock/watch, timer how often? always, never, often, sometimes, usually once, twice</p> <p>SHAPE AND SPACE shape, pattern flat, curved, straight round hollow, solid corner point, pointed face, side, edge, end sort make, build, draw surface right- angled vertex, vertices layer, diagram</p> <p>3D SHAPES cube cuboid pyramid sphere, hemi-sphere cone cylinder prism</p> <p>2D SHAPES circle, circular, semi-circle triangle, triangular square rectangle, rectangular star pentagon, pentagonal hexagon, hexagonal octagon, octagonal quadrilateral</p> <p>PATTERNS AND SYMMETRY</p>
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		<p>size bigger, larger, smaller symmetrical line of symmetry fold match mirror line, reflection pattern repeating pattern</p> <p>POSITION, DIRECTION AND MOVEMENT</p> <p>position over, under, underneath above, below top, bottom, side on, in outside, inside around in front, behind front, back before, after beside, next to opposite apart between middle, edge centre corner direction journey, route, map, plan left, right up, down higher, lower forwards, backwards, sideways across close, far, near along through to, from, towards, away from ascend, descend grid row, column clockwise, anti-clockwise compass point north, south, east, west (N, S, E, W) horizontal, vertical diagonal movement slide roll whole turn, half turn, quarter turn angle, ...is a greater/smaller angle than right angle straight line stretch, bend</p>
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Year 4		
Numbers and the number system	Calculations	Solving problems
<p>PLACE VALUE, ORDERING AND ROUNDING units, ones tens, hundreds, thousands ten thousand, hundred thousand, million digit, one-, two-, three- or four-digit number numeral 'teens' number place, place value stands for, represents exchange the same number as, as many as equal to Of two objects/amounts: >, greater than, more than, larger than, bigger than < less than, fewer than, smaller than Of three or more objects/amounts: greatest, most, largest, biggest least, fewest, smallest one... ten... one hundred... one thousand more/less compare, order, size first... tenth... twentieth last, last but one before, after next between, half-way between guess how many, estimate nearly, roughly, close to, about the same as approximate, approximately just over, just under exact, exactly too many, too few, enough, not enough round (up or down), nearest round to the nearest ten round to the nearest hundred integer, positive, negative above/below zero, minus</p> <p>PROPERTIES OF NUMBERS AND NUMBER SEQUENCES number, count, how many...? odd, even every other how many times? multiple of digit next, consecutive sequence continue predict pattern, pair, rule relationship sort, classify, property</p> <p>FRACTIONS AND DECIMALS part, equal parts fraction one whole half, quarter, eighth third, sixth fifth, tenth, twentieth proportion, in every, for every decimal, decimal fraction decimal point, decimal place</p>	<p>ADDITION AND SUBTRACTION add, addition, more, plus, increase sum, total, altogether score double, near double how many more to make...? subtract, subtraction, take (away), minus, decrease leave, how many are left/left over? difference between half, halve how many more/fewer is... than...? how much more/less is...? equals, sign, is the same as tens boundary, hundreds boundary inverse</p> <p>MULTIPLICATION AND DIVISION lots of, groups of times, multiply, multiplication, multiplied by multiple of, product once, twice, three times... ten times... times as (big, long, wide... and so on) repeated addition array row, column double, halve share, share equally one each, two each, three each... group in pairs, threes... tens equal groups of divide, division, divided by, divided into remainder factor, quotient, divisible by inverse</p>	<p>MAKING DECISIONS AND REASONING pattern, puzzle calculate, calculation mental calculation method jotting answer right, correct, wrong what could we try next? how did you work it out? number sentence sign, operation, symbol, equation</p> <p>MONEY money coin, note penny, pence, pound (£) price, cost buy, bought, sell, sold spend, spent pay change dear, costs more, more/most expensive cheap, costs less, cheaper, less/least expensive how much...? how many...? total, amount value, worth</p>
	Measures, shape and space	Handling data
	MEASURES (GENERAL) measure, measurement size compare unit, standard unit metric unit, imperial unit measuring scale, division guess, estimate enough, not enough too much, too little too many, too few nearly, roughly, about, close to about the same as, approximately just over, just under	count, tally, sort, vote survey, questionnaire, data graph, block graph, pictogram represent group, set list, chart, bar chart, tally chart table, frequency table Carroll diagram, Venn diagram label, title, axis, axes diagram most popular, most common least popular, least common
	LENGTH length, width, height, depth, breadth long, short, tall, high, low wide, narrow, deep, shallow, thick, thin longer, shorter, taller, higher... and so on longest, shortest, tallest, highest... and so on far, further, furthest, near,	General same, different missing number/s number facts, number pairs, number bonds greatest value, least value number line, number track number square, hundred square number cards, number grid abacus counters, cubes, blocks, rods die, dice dominoes pegs, peg board, pin board geo-strips same way, different way best way, another way in order, in a different order not all, every, each

Instructions		
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<p>listen, join in, say, recite think, imagine, remember start from, start with, start at look at, point to, show me put, place arrange, rearrange change, change over split, separate carry on, continue, repeat what comes next? predict describe the pattern, describe the rule find, find all, find different investigate choose, decide collect use, make, build, construct tell me, describe, name, pick out discuss, talk about explain explain your method explain how you got your answer give an example of... show how you... show your working justify make a statement read, write, record write in figures present, represent interpret trace, copy complete, finish, end fill in, shade, colour label, plot tick, cross draw, sketch draw a line between, join (up), ring, arrow cost, count, tally calculate, work out, solve investigate, question answer check</p>	<p>MEASURES (GENERAL) measure, measurement size compare unit, standard unit metric unit, imperial unit measuring scale, division guess, estimate enough, not enough too much, too little too many, too few nearly, roughly, about, close to about the same as, approximately just over, just under</p> <p>LENGTH length, width, height, depth, breadth long, short, tall, high, low wide, narrow, deep, shallow, thick, thin longer, shorter, taller, higher... and so on longest, shortest, tallest, highest... and so on far, further, furthest, near, close distance apart/between, distance to... from... edge, perimeter kilometre (km), metre (m) centimetre (cm), millimetre (mm) mile ruler, metre stick, tape measure</p> <p>MASS mass: big, bigger, small, smaller, balances weight: heavy/light, heavier/lighter, heaviest/lightest weigh, weighs kilogram (kg), half-kilogram, gram (g) balance, scales</p> <p>CAPACITY capacity full, half full empty holds, contains litre (l), half-litre, millilitre (ml) pint container, measuring cylinder</p> <p>AREA area, covers, surface square centimetre (cm²)</p> <p>TIME time days of the week: Monday, Tuesday... months of the year: January, February... seasons: spring, summer, autumn, winter day, week, fortnight, month year, leap year, century, millennium weekend, birthday, holiday calendar, date, date of birth morning, afternoon, evening,</p>		
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night, am, pm, noon, midnight today, yesterday, tomorrow before, after, next, last now, soon, early, late, earliest, latest quick, quicker, quickest, quickly fast, faster, fastest, slow, slower, slowest, slowly old, older, oldest, new, newer, newest takes longer, takes less time how long ago? how long will it be to...? how long will it take to...? timetable, arrive, depart hour, minute, second o'clock, half past, quarter to, quarter past clock, watch, hands digital/analogue clock/watch, timer how often? always, never, often, sometimes, usually

SHAPE AND SPACE

shape, pattern flat, line curved, straight round hollow, solid corner point, pointed face, side, edge, end sort make, build, construct, draw, sketch centre, radius, diameter net surface angle, right-angled base, square-based vertex, vertices layer, diagram regular, irregular concave, convex open, closed

3D SHAPES

3D, three-dimensional cube cuboid pyramid sphere, hemi-sphere, spherical cone cylinder, cylindrical prism tetrahedron, polyhedron

2D SHAPES

2D, two-dimensional circle, circular, semi-circle triangle, triangular equilateral triangle, isosceles triangle square rectangle, rectangular, oblong pentagon, pentagonal hexagon, hexagonal heptagon octagon, octagonal polygon quadrilateral

PATTERNS AND SYMMETRY

size bigger, larger, smaller symmetrical line of symmetry, line symmetry fold match mirror line, reflection, reflect pattern, repeating pattern, translation

	<p>POSITION, DIRECTION AND MOVEMENT position over, under, underneath above, below, top, bottom, side on, in, outside, inside, around in front, behind, front, back before, after, beside, next to opposite, apart between, middle, edge, centre corner direction journey, route, map, plan left, right up, down, higher, lower forwards, backwards, sideways, across close, far, near along, through, to, from, towards, away from ascend, descend grid row, column origin, coordinates clockwise, anti-clockwise 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 movement slide, roll whole turn, half turn, quarter turn, rotate angle, ...is a greater/smaller angle than right angle degree straight line stretch, bend ruler, set square angle measurer, compasses</p>	
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Year 5		
Numbers and the number system	Measures, shape and space	Calculations
<p>PLACE VALUE, ORDERING AND ROUNDING units, ones tens, hundreds, thousands ten thousand, hundred thousand, million digit, one-, two-, three- or four-digit number numeral 'teens' number place, place value stands for, represents exchange the same number as, as many as equal to Of two objects/amounts: >, greater than, more than, larger than, bigger than < less than, fewer than, smaller than ≥, greater than or equal to ≤, less than or equal to Of three or more objects/amounts: greatest, most, largest, biggest least, fewest, smallest one... ten... one hundred... one thousand more/less compare, order, size ascending/descending order first... tenth... twentieth last, last but one before, after, next between, half-way between guess how many, estimate nearly, roughly, close to, about the same as approximate, approximately ≈, is approximately equal to just over, just under exact, exactly too many, too few, enough, not enough round (up or down), nearest round to the nearest ten/hundred round to the nearest thousand integer positive, negative above/below zero, minus</p> <p>PROPERTIES OF NUMBERS AND NUMBER SEQUENCES number, count, how many...? odd, even every other how many times? multiple of digit next, consecutive sequence continue predict pattern, pair, rule relationship sort, classify, property formula divisible (by), divisibility, factor square number one squared, two squared... (12 , 22 ...)</p>	<p>MEASURES (GENERAL) measure, measurement size compare unit, standard unit metric unit, imperial unit measuring scale, division guess, estimate enough, not enough too much, too little too many, too few nearly, roughly, about, close to about the same as, approximately just over, just under</p> <p>LENGTH length, width, height, depth, breadth long, short, tall, high, low wide, narrow, deep, shallow, thick, thin longer, shorter, taller, higher... and so on longest, shortest, tallest, highest... and so on far, further, furthest, near, close distance apart/between, distance to... from... edge, perimeter kilometre (km), metre (m) centimetre (cm), millimetre (mm) mile ruler, metre stick, tape measure</p> <p>MASS mass: big, bigger, small, smaller, balances weight: heavy/light, heavier/lighter, heaviest/lightest weigh, weighs kilogram (kg), half-kilogram, gram (g) balance, scales</p> <p>CAPACITY capacity full, half full empty holds, contains litre (l), half-litre, millilitre (ml) pint, gallon container, measuring cylinder</p> <p>AREA area, covers, surface square centimetre (cm²), square metre (m²) square millimetre (mm²)</p> <p>TIME time days of the week: Monday, Tuesday... months of the year: January, February... seasons: spring, summer, autumn, winter day,</p>	<p>ADDITION AND SUBTRACTION add, addition, more, plus, increase sum, total, altogether score double, near double how many more to make...? subtract, subtraction, take (away), minus, decrease leave, how many are left/left over? difference between half, halve how many more/fewer is... than...? how much more/less is...? equals, sign, is the same as tens boundary, hundreds boundary units boundary, tenths boundary inverse</p>
		<p>MULTIPLICATION AND DIVISION lots of, groups of times, multiply, multiplication, multiplied by multiple of, product once, twice, three times... ten times... times as (big, long, wide... and so on) repeated addition array row, column double, halve share, share equally, one each, two each, three each... group in pairs, threes... tens equal groups of divide, division, divided by, divided into remainder factor, quotient, divisible by inverse</p>
		<p>Solving problems</p> <p>MAKING DECISIONS AND REASONING pattern, puzzle calculate, calculation mental calculation method, strategy jotting answer right, correct, wrong what could we try next? how did you work it out? number sentence sign, operation, symbol, equation</p> <p>MONEY money coin, note penny, pence, pound (£) price, cost buy, bought, sell, sold spend, spent pay change dear, costs more, more/most expensive cheap, costs less, cheaper, less/least expensive how much...? how many...? total, amount, value, worth discount currency</p>

<p>FRACTIONS, DECIMALS, PERCENTAGES, RATIO AND PROPORTION</p> <p>part, equal 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 proportion, ratio in every, for every to every, as many as decimal, decimal fraction decimal point, decimal place percentage, per cent, %</p>	<p>week, fortnight, month year, leap year, century, millennium weekend, birthday, holiday calendar, date, date of birth morning, afternoon, evening, night am, pm, noon, midnight today, yesterday, tomorrow before, after, next, last now, soon, early, late, earliest, latest quick, quicker, quickest, quickly fast, faster, fastest, slow, slower, slowest, slowly old, older, oldest, new, newer, newest takes longer, takes less time how long ago? how long will it be to...? how long will it take to...? timetable, arrive, depart hour, minute, second o'clock, half past, quarter to, quarter past clock, watch, hands digital/analogue clock/watch, timer 24-hour clock, 12-hour clock how often? always, never, often, sometimes, usually</p>	
<p>Instructions</p>		<p>Handling Data</p>
<p>listen, join in, say, recite think, imagine, remember start from, start with, start at look at, point to, show me put, place arrange, rearrange change, change over split, separate carry on, continue, repeat what comes next? predict describe the pattern, describe the rule find, find all, find different investigate choose, decide collect use, make, build, construct, bisect tell me, describe, name, pick out, identify discuss, talk about explain explain your method/answer/reasoning give an example of... show how you... show your working justify make a statement read, write, record write in figures present, represent interpret trace, copy complete, finish, end fill in, shade, colour label, plot tick, cross draw, sketch draw a line between, join (up), ring, arrow cost, count, tally</p>	<p>SHAPE AND SPACE</p> <p>shape, pattern flat, line curved, straight round hollow, solid corner point, pointed face, side, edge, end sort make, build, construct, draw, sketch centre, radius, diameter net surface angle, right-angled congruent base, square-based vertex, vertices layer, diagram regular, irregular concave, convex open, closed</p> <p>3D SHAPES</p> <p>3D, three-dimensional cube, cuboid pyramid sphere, hemi-sphere, spherical cone cylinder, cylindrical prism tetrahedron, polyhedron, octahedron</p> <p>2D SHAPES</p> <p>2D, two-dimensional circle, circular, semi-circle triangle, triangular equilateral triangle, isosceles triangle, scalene triangle square rectangle, rectangular, oblong pentagon, pentagonal hexagon, hexagonal heptagon octagon, octagonal polygon quadrilateral</p>	<p>count, tally, sort, vote survey, questionnaire data, database graph, block graph, line graph pictogram, represent group, set list, chart, bar chart, bar line chart tally chart table, frequency table Carroll diagram, Venn diagram label, title, axis, axes diagram most popular, most common least popular, least common mode, range maximum/minimum value classify, outcome PROBABILITY fair, unfair likely, unlikely, likelihood certain, uncertain probable, possible, impossible chance, good chance poor chance, no chance risk, doubt</p>

calculate, work out, solve, convert investigate, question answer check	<p>PATTERNS AND SYMMETRY size bigger, larger, smaller symmetrical line of symmetry, axis of symmetry line symmetry, reflective symmetry fold match mirror line, reflection, reflect pattern, repeating pattern, translation</p> <p>POSITION, DIRECTION AND MOVEMENT position over, under, underneath above, below, top, bottom, side on, in, outside, inside, around in front, behind, front, back before, after, beside, next to opposite, apart between, middle, edge, centre corner direction journey, route, map, plan left, right up, down, higher, lower forwards, backwards, sideways, across close, far, near along, through, to, from, towards, away from ascend, descend grid, row, column origin, coordinates clockwise, anti-clockwise 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 parallel, perpendicular x-axis, y-axis quadrant movement slide, roll whole turn, half turn, quarter turn rotate, rotation angle, ...is a greater/smaller angle than right angle, acute, obtuse degree straight line stretch, bend ruler, set square angle measurer, compasses, protractor</p>	
General		
same, different missing number/s number facts, number pairs, number bonds greatest value, least value number line, number track number square, hundred square number cards, number grid abacus counters, cubes, blocks, rods die, dice, spinner dominoes pegs, peg board, pin board geo-strips same way, different way best way, another way in order, in a different order not all, every, each		
Year 6		
Numbers and the number system	Solving problems	Calculations

<p>PLACE VALUE, ORDERING AND ROUNDING units, ones tens, hundreds, thousands ten thousand, hundred thousand, million digit, one-, two-, three- or four-digit number numeral 'teens' number place, place value stands for, represents exchange the same number as, as many as equal to Of two objects/amounts:</p> <p>>, greater than, more than, larger than, bigger than</p> <p>< less than, fewer than, smaller than</p> <p>≥, greater than or equal to</p> <p>≤, less than or equal to</p> <p>Of three or more objects/amounts: greatest, most, largest, biggest least, fewest, smallest one... ten... one hundred... one thousand more/less compare, order, size ascending/descending order first... tenth... twentieth last, last but one before, after next between, half-way between guess how many, estimate nearly, roughly, close to, about the same as approximate, approximately ≈, is approximately equal to just over, just under exact, exactly too many, too few, enough, not enough round (up or down), nearest round to the nearest ten/hundred/thousand integer, positive, negative above/below zero, minus</p> <p>PROPERTIES OF NUMBERS AND NUMBER SEQUENCES number, count, how many...? odd, even every other how many times? multiple of digit next, consecutive sequence continue predict pattern, pair, rule relationship sort,</p>	<p>MAKING DECISIONS AND REASONING pattern, puzzle calculate, calculation mental calculation method, strategy jotting answer right, correct, wrong what could we try next? how did you work it out? number sentence sign, operation, symbol, equation</p> <p>MONEY money coin, note penny, pence, pound (£) price, cost buy, bought, sell, sold spend, spent pay change dear, costs more, more/most expensive cheap, costs less, cheaper, less/least expensive how much...? how many...? total, amount, value, worth discount, profit, loss currency</p> <p>Handling data</p> <p>count, tally, sort, vote survey, questionnaire data, database graph, block graph, line graph pictogram, represent group, set list, chart, bar chart, bar line chart tally chart table, frequency table Carroll diagram, Venn diagram label, title, axis, axes diagram most popular, most common least popular, least common mode, range, mean, average, median statistics, distribution maximum/minimum value classify, outcome</p> <p>PROBABILITY fair, unfair likely, unlikely, likelihood, equally likely certain, uncertain probable, possible, impossible chance, good chance, poor chance, no chance equal chance, even chance, fifty-fifty chance risk, doubt biased, random</p> <p>Instructions</p>	<p>ADDITION AND SUBTRACTION add, addition, more, plus, increase sum, total, altogether score double, near double how many more to make...? subtract, subtraction, take (away), minus, decrease leave, how many are left/left over? difference between half, halve how many more/fewer is... than...? how much more/less is...? equals, sign, is the same as tens boundary, hundreds boundary units boundary, tenths boundary inverse</p> <p>MULTIPLICATION AND DIVISION lots of, groups of times, multiply, multiplication, multiplied by multiple of, product once, twice, three times... ten times... times as (big, long, wide... and so on) repeated addition array, row, column double, halve 33 Words new to Year 6 are in red YEAR 6 share, share equally one each, two each, three each... group in pairs, threes... tens equal groups of divide, division, divided by, divided into remainder factor, quotient, divisible by inverse</p> <p>General</p> <p>same, identical, different missing number/s number facts, number pairs, number bonds greatest value, least value number line, number track number square, hundred square number cards, number grid abacus counters, cubes, blocks, rods die, dice, spinner dominoes pegs, peg board, pin board geo-strips same way,</p>
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<p>classify, property formula divisible (by), divisibility, factor, factorise square number one squared, two squared... (12, 22 ...) prime, prime factor FRACTIONS, DECIMALS, PERCENTAGES, RATIO AND PROPORTION part, equal 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, %</p>	<p>listen, join in, say, recite think, imagine, remember start from, start with, start at look at, point to, show me put, place arrange, rearrange change, change over adjusting, adjust split, separate carry on, continue, repeat what comes next? predict describe the pattern, describe the rule find, find all, find different investigate choose, decide collect use, make, build, construct, bisect tell me, define, describe, name, pick out, identify discuss, talk about explain explain your method/answer/reasoning give an example of... show how you... show your working justify make a statement read, write, record write in figures present, represent interpret trace, copy complete, finish, end fill in, shade, colour label, plot tick, cross draw, sketch draw a line between, join (up), ring, arrow cost, count, tally calculate, work out, solve, convert investigate, interrogate (data), question, prove answer check</p>	<p>different way best way, another way in order, in a different order not all, every, each</p>
<p>Measures, shape and space</p>		
<p>MEASURES (GENERAL) measure, measurement size compare unit, standard unit metric unit, imperial unit measuring scale, division guess, estimate enough, not enough too much, too little too many, too few nearly, roughly, about, close to about the same as, approximately just over, just under</p> <p>LENGTH length, width, height, depth, breadth long, short, tall, high, low wide, narrow, deep, shallow, thick, thin longer, shorter, taller, higher... and so on longest, shortest, tallest, highest... and so on far, further, furthest, near, close distance apart/between, distance to... from... edge, perimeter, circumference kilometre (km), metre (m) centimetre (cm), millimetre (mm) mile, yard, feet, foot, inches, inch ruler, metre stick, tape measure, compasses</p> <p>MASS mass: big, bigger, small, smaller, balances weight: heavy/light, heavier/lighter, heaviest/lightest weigh, weighs tonne, kilogram (kg), half-kilogram, gram (g) pound (lb), ounce (oz) balance, scales</p> <p>CAPACITY capacity full, half full, empty holds, contains litre (l), half-litre, centilitre (cl), millilitre (ml) pint, gallon container, measuring cylinder AREA area, covers, surface square centimetre (cm²), square metre (m²) square millimetre (mm²)</p> <p>TIME time days of the week: Monday, Tuesday... months of the year: January, February... seasons: spring, summer, autumn, winter day, week, fortnight, month year, leap year, century, millennium weekend, birthday, holiday calendar, date, date of birth morning, afternoon, evening, night am, pm, noon, midnight today, yesterday, tomorrow before, after, next, last now, soon, early, late, earliest, latest quick, quicker, quickest, quickly fast, faster, fastest,</p>		

slow, slower, slowest, slowly old, older, oldest, new, newer, newest takes longer, takes less time how long ago? how long will it be to...? how long will it take to...? timetable, arrive, depart hour, minute, second o'clock, half past, quarter to, quarter past clock, watch, hands digital/analogue clock/watch, timer 24-hour clock, 12-hour clock Greenwich Mean Time, British Summer Time International Date Line how often? always, never, often, sometimes, usually

SHAPE AND SPACE

shape, pattern flat, line curved, straight round hollow, solid corner point, pointed face, side, edge, end sort make, build, construct, draw, sketch centre, radius, diameter circumference, concentric, arc net surface angle, right-angled congruent intersecting, intersection plane base, square-based vertex, vertices layer, diagram regular, irregular concave, convex open, closed tangram

3D SHAPES

3D, three-dimensional cube, cuboid pyramid sphere, hemi-sphere, spherical cone cylinder, cylindrical prism tetrahedron, polyhedron, octahedron, dodecahedron

2D SHAPES

2D, two-dimensional circle, circular, semi-circle triangle, triangular equilateral triangle, isosceles triangle, scalene triangle square, rhombus rectangle, rectangular, oblong pentagon, pentagonal hexagon, hexagonal heptagon octagon, octagonal polygon quadrilateral kite parallelogram, trapezium

PATTERNS AND SYMMETRY

size bigger, larger, smaller symmetrical line of symmetry, axis of symmetry line symmetry, reflective symmetry fold match mirror line, reflection, reflect pattern, repeating pattern, translation

POSITION, DIRECTION AND MOVEMENT

position over, under, underneath above, below, top, bottom, side on, in, outside, inside, around in front, behind, front, back before, after, beside, next to opposite, apart between, middle, edge, centre corner direction journey, route, map, plan left, right up, down, higher, lower forwards, backwards, sideways, across close, far, near along, through, to, from, towards, away from ascend, descend grid, row, column origin, coordinates clockwise, anti-clockwise 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 parallel, perpendicular x-axis, y-axis quadrant movement slide, roll whole turn, half turn, quarter turn, rotate, rotation angle, ...is a greater/smaller angle than right angle, acute, obtuse, reflex degree straight line stretch, bend ruler, set square angle measurer, compasses, protractor

Progressive Curriculum Plan

Number and place value/ Counting

Aged 2-4	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5.	Count confidently, developing a deep understanding of the numbers to 10.	count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number			count backwards through zero to include negative numbers	interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero	use negative numbers in context, and calculate intervals across zero
Take part in finger rhymes with numbers. React to changes of amount in a group of up to three items. Show 'finger numbers' up to 5.	Verbally count beyond 20, recognising the pattern of the counting system.	count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward	count from 0 in multiples of 4, 8, 50 and 100;	count in multiples of 6, 7, 9, 25 and 1000	count forwards or backwards in steps of powers of 10 for any given number up to 1000 000	
Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').	Understand the 'one more than/one less than' relationship between consecutive numbers.	given a number, identify one more and one less		find 10 or 100 more or less than a given number	find 1000 more or less than a given number		
Count in everyday contexts, sometimes skipping numbers – '1-2-3-5'.	Count objects, actions and sounds.						
Develop counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence.							
Comparing numbers							
Compare amounts, saying 'lots', 'more',	Compare quantities up to 10 in different contexts, recognising	use the language of: equal to, more	compare and order numbers from 0 up	compare and order numbers up to 1000	order and compare numbers beyond 1000	read, write, order and compare numbers to at least	read, write, order and compare numbers up to 10 000000 and

‘more than’, ‘fewer than’ or ‘same’.	when one quantity is greater than, less than or the same as the other quantity.	than, less than (fewer), most, least	to 100; use <, > and = signs			1 000 000 and determine the value of each digit <i>(appears also in Reading and Writing Numbers)</i>	determine the value of each digit (appears also in Reading and Writing Numbers)
	Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. Spot connections.				<i>compare numbers with the same number of decimal places up to two decimal places (copied from Fractions)</i>		
Identifying, representing and estimating numbers							
Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.	Subitise (recognise quantities without counting) up to 5.	identify and represent numbers using objects and pictorial representations including the number line	identify, represent and estimate numbers using different representations, including the number line	identify, represent and estimate numbers using different representations	identify, represent and estimate numbers using different representations		
	Link the number symbol (numeral) with its cardinal number value.						
Reading and writing numbers (including Roman numerals)							
Experiment with their own symbols and marks as well as numerals.	Have a deep understanding of numbers to 10, including the composition of each number.	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	read and write numbers up to 1000 in numerals and in words		read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit <i>(appears also in Comparing Numbers)</i>	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit <i>(appears also in Understanding Place Value)</i>
				<i>tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks (copied from Measurement)</i>		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.	

Understanding place value

			recognise the place value of each digit in a two-digit number (tens, ones)	recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (<i>appears also in Reading and Writing Numbers</i>)	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (<i>appears also in Reading and Writing Numbers</i>)
					<i>find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths (copied from Fractions)</i>	<i>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (copied from Fractions)</i>	<i>identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places (copied from Fractions)</i>

Rounding

					round any number to the nearest 10, 100 or 1 000	round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000	round any whole number to a required degree of accuracy
					<i>round decimals with one decimal place to the nearest whole number (copied from Fractions)</i>	<i>round decimals with two decimal places to the nearest whole number and to one decimal place (copied from Fractions)</i>	<i>solve problems which require answers to be rounded to specified degrees of accuracy (copied from Fractions)</i>

Problem solving

Solve real world mathematical problems with numbers up to 5.			use place value and number facts to solve problems	solve number problems and practical problems involving these ideas.	solve number and practical problems that involve all of the above and with increasingly large positive numbers	solve number problems and practical problems that involve all of the above	solve number and practical problems that involve all of the above
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Addition and subtraction

Number bonds							
Aged 2-4	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Develop fast recognition of up to 3 objects, without having to count them individually ('subitising').	Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	represent and use number bonds and related subtraction facts within 20	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100				
Addition and subtraction							
Mental calculation							
		add and subtract one-digit and two-digit numbers to 20, including zero	add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers 	add and subtract numbers mentally, including: <ul style="list-style-type: none"> * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds 		add and subtract numbers mentally with increasingly large numbers	perform mental calculations, including with mixed operations and large numbers
		read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (<i>appears also in Written Methods</i>)	show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot				use their knowledge of the order of operations to carry out calculations involving the four operations
Written methods							
		read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (<i>appears also in Mental Calculation</i>)		add and subtract numbers with up to three digits, using formal written methods of	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar	

				columnar addition and subtraction	and subtraction where appropriate	addition and subtraction)	
Inverse operations, estimating and checking answers							
			recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	estimate the answer to a calculation and use inverse operations to check answers	estimate and use inverse operations to check answers to a calculation	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.
Problem solving							
		solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = * - 9$	solve problems with addition and subtraction: * using concrete objects and pictorial representations, including those involving numbers, quantities and measures * applying their increasing knowledge of mental and written methods	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	solve 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
Geometry: Properties of shape							
Identifying shapes and their properties							
Aged 2-4	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and	Develop spatial reasoning skills across all areas of mathematics including shape, space and measures.	Recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [e.g. rectangles	identify and describe the properties of 2-D shapes, including the number of sides		identify lines of symmetry in 2-D shapes presented in different orientations	identify 3-D shapes, including cubes and other cuboids, from 2-D representations	recognise, describe and build simple 3-D shapes, including making nets <i>(appears also in</i>

mathematical language: ‘sides’, ‘corners’; ‘straight’, ‘flat’, ‘round’.		* (including squares), circles and triangles] 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].	and line symmetry in a vertical line				<i>Drawing and Constructing)</i>
Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like ‘pointy’, ‘spotty’, ‘blobs’, etc.			identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces				illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc.			identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]				
Drawing and constructing							
Combine shapes to make new ones – an arch, a bigger triangle, etc.	Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.			draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	complete a simple symmetric figure with respect to a specific line of symmetry	draw given angles, and measure them in degrees (°)	draw 2-D shapes using given dimensions and angles
Combine objects like stacking blocks and cups. Build with a range of resources. Complete inset puzzles.							recognise, describe and build simple 3-D shapes, including making nets (<i>appears also in Identifying Shapes and Their Properties</i>)
Comparing and classifying							
	Select, rotate and manipulate shapes to develop spatial reasoning skills.		compare and sort common 2-D and 3-D shapes and everyday objects		compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	use the properties of rectangles to deduce related facts and find missing lengths and angles	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
						distinguish between regular and irregular polygons based on reasoning about	

						equal sides and angles	
Angles							
				recognise angles as a property of shape or a description of a turn		know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	
				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 acute and obtuse angles and compare and order angles up to two right angles by size	identify: <ul style="list-style-type: none"> * angles at a point and one whole turn (total 360°) * angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) other multiples of 90°	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
				identify horizontal and vertical lines and pairs of perpendicular and parallel lines			

Measurement							
Comparing and estimating							
Aged 2-4	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Compare sizes, weights etc. using gesture and language - 'bigger / little / smaller', 'high/low', 'tall', 'heavy'.	Compare length, weight and capacity.	compare, describe and solve practical problems for: <ul style="list-style-type: none"> * lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] * mass/weight [e.g. heavy/light, 	compare and order lengths, mass, volume/capacity and record the results using >, < and =		estimate, compare and calculate different measures, including money in pounds and pence (<i>also included in Measuring</i>)	calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes (also included in measuring)	calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3 .

Make comparisons between objects relating to size, length, weight and capacity.		heavier than, lighter than] * capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] * time [e.g. quicker, slower, earlier, later]				estimate volume (e.g. using 1 cm ³ blocks to build cubes and cuboids) and capacity (e.g. using water)	
		sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	compare and sequence intervals of time	compare durations of events, for example to calculate the time taken by particular events or tasks			
				estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight <i>(appears also in Telling the Time)</i>			
Measuring and calculating							
		measure and begin to record the following: * lengths and heights * mass/weight * capacity and volume * time (hours, minutes, seconds)	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales,	measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	estimate, compare and calculate different measures, including money in pounds and pence <i>(appears also in Comparing)</i>	use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate <i>(appears also in Converting)</i>

			thermometers and measuring vessels				
				measure the perimeter of simple 2-D shapes	measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	recognise that shapes with the same areas can have different perimeters and vice versa
		recognise and know the value of different denominations of coins and notes	recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	add and subtract amounts of money to give change, using both £ and p in practical contexts			
			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				
					find the area of rectilinear shapes by counting squares	calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes <i>recognise and use square numbers and</i>	calculate the area of parallelograms and triangles calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [e.g. mm^3 and km^3].

						<i>cube numbers, and the notation for squared (²) and cubed (³) (copied from Multiplication and Division)</i>	recognise when it is possible to use formulae for area and volume of shapes
Telling the time							
		tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	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.	tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	read, write and convert time between analogue and digital 12 and 24-hour clocks (<i>appears also in Converting</i>)		
		recognise and use language relating to dates, including days of the week, weeks, months and years	know the number of minutes in an hour and the number of hours in a day. (<i>appears also in Converting</i>)	estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (<i>appears also in Comparing and Estimating</i>)			
					solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (<i>appears also in Converting</i>)	solve problems involving converting between units of time	
Converting							

			know the number of minutes in an hour and the number of hours in a day. <i>(appears also in Telling the Time)</i>	know the number of seconds in a minute and the number of days in each month, year and leap year	convert between different units of measure (e.g. kilometre to metre; hour to minute)	convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
					read, write and convert time between analogue and digital 12 and 24-hour clocks <i>(appears also in Converting)</i>	solve problems involving converting between units of time	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate <i>(appears also in Measuring and Calculating)</i>
					solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days <i>(appears also in Telling the Time)</i>	understand and use equivalences between metric units and common imperial units such as inches, pounds and pints	convert between miles and kilometres

Geometry: Position and direction

Position, direction and movement

Aged 2-4	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Describe routes (including a familiar route and location), using words like 'in front of' and 'behind'.		describe position, direction and movement, including half, quarter and three-quarter turns.	use mathematical vocabulary to describe position, direction and movement including movement in a straight line and		describe positions on a 2-D grid as coordinates in the first quadrant	identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know	describe positions on the full coordinate grid (all four quadrants)

Understand position through words alone – for example, “The bag is under the table,” – with no pointing.			distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)		describe movements between positions as translations of a given unit to the left/right and up/down	that the shape has not changed	draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
Put objects inside others and take them out again.					plot specified points and draw sides to complete a given polygon		
Climb and squeeze themselves into different types of spaces.							
Pattern							
			order and arrange combinations of mathematical objects in patterns and sequences				

Algebra							
Equations							
Aged 2-4	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		<i>solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = * - 9$ (copied from Addition and Subtraction)</i>	<i>recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. (copied from Addition and Subtraction)</i>	<i>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. (copied from Addition and Subtraction)</i>		<i>use the properties of rectangles to deduce related facts and find missing lengths and angles (copied from Geometry: Properties of Shapes)</i>	express missing number problems algebraically
				<i>solve problems, including missing number problems, involving multiplication and</i>			

				<i>division, including integer scaling (copied from Multiplication and Division)</i>			
			<i>recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 (copied from Addition and Subtraction)</i>				find pairs of numbers that satisfy number sentences involving two unknowns
		<i>represent and use number bonds and related subtraction facts within 20 (copied from Addition and Subtraction)</i>					enumerate all possibilities of combinations of two variables
Formulae							
					<i>Perimeter can be expressed algebraically as $2(a + b)$ where a and b are the dimensions in the same unit. (Copied from NSG measurement)</i>		use simple formulae
							<i>recognise when it is possible to use formulae for area and volume of shapes (copied from Measurement)</i>
Sequences							
Extend and create ABAB patterns – stick, leaf, stick, leaf.	Continue, copy and create repeating patterns.	<i>sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening (copied from Measurement)</i>	<i>compare and sequence intervals of time (copied from Measurement)</i>				generate and describe linear number sequences
Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'							
Notice patterns and arrange things in patterns. Notice and			<i>order and arrange combinations of mathematical objects in patterns</i>				

correct an error in a repeating pattern.			(copied from Geometry: position and direction)				
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Multiplication and division

Multiplication and division facts

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
count in multiples of twos, fives and tens (copied from Number and Place Value)	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value)	count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value)	count in multiples of 6, 7, 9, 25 and 1 000 (copied from Number and Place Value)	count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (copied from Number and Place Value)	
	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	recall multiplication and division facts for multiplication tables up to 12×12		

Mental calculation

		write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (<i>appears also in Written Methods</i>)	use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers	multiply and divide numbers mentally drawing upon known facts	perform mental calculations, including with mixed operations and large numbers
	show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot		recognise and use factor pairs and commutativity in mental calculations (<i>appears also in Properties of Numbers</i>)	multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	<i>associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$) (copied from Fractions)</i>

Written calculation

	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs	write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (<i>appears also in Mental Methods</i>)	multiply two-digit and three-digit numbers by a one-digit number using formal written layout	multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
				divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context 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
					<i>use written division methods in cases where the answer has up to two decimal places (copied from Fractions)</i>
Properties of numbers: multiples, factors, primes, square and cube numbers					
			recognise and use factor pairs and commutativity in mental calculations (repeated)	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.	identify common factors, common multiples and prime numbers <i>use common factors to simplify fractions; use common multiples to express fractions in the same denomination (copied from Fractions)</i>
				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 for squared (2) and cubed (3)	<i>calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3 (copied from Measures)</i>

Order of operations					
					use their knowledge of the order of operations to carry out calculations involving the four operations
Inverse operations, estimating and checking answers					
		<i>estimate the answer to a calculation and use inverse operations to check answers (copied from Addition and Subtraction)</i>	<i>estimate and use inverse operations to check answers to a calculation (copied from Addition and Subtraction)</i>		use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy
Problem solving					
solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	solve problems involving addition, subtraction, multiplication and division
				solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	
				solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	<i>solve problems involving similar shapes where the scale factor is known or can be found (copied from Ratio and Proportion)</i>
Fractions, decimals and percentages					
Counting in fractional steps					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<i>Pupils should count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the number line (Non Statutory Guidance)</i>	count up and down in tenths	count up and down in hundredths		
Recognising fractions					

recognise, find and name a half as one of two equal parts of an object, shape or quantity	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	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (<i>appears also in Equivalence</i>)	
recognise, find and name a quarter as one of four equal parts of an object, shape or quantity		recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10.			
		recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators			
Comparing fractions					
		compare and order unit fractions, and fractions with the same denominators		compare and order fractions whose denominators are all multiples of the same number	compare and order fractions, including fractions >1
Comparing decimals					
			compare numbers with the same number of decimal places up to two decimal places	read, write, order and compare numbers with up to three decimal places	identify the value of each digit in numbers given to three decimal places
Rounding including decimals					
			round decimals with one decimal place to the nearest whole number	round decimals with two decimal places to the nearest whole number and to one decimal place	solve problems which require answers to be rounded to specified degrees of accuracy
Equivalence					
	write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	recognise and show, using diagrams, equivalent fractions with small denominators	recognise and show, using diagrams, families of common equivalent fractions	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	use common factors to simplify fractions; use common multiples to express fractions in the same denomination
			recognise and write decimal equivalents of any number of tenths or hundredths	read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$)	associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)
				recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	

			recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$	recognise the per cent symbol (%) and understand that per cent relates to “number of parts per hundred”, and write percentages as a fraction with denominator 100 as a decimal fraction	recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
Addition and subtraction of fractions					
		add and subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$)	add and subtract fractions with the same denominator	add and subtract fractions with the same denominator and multiples of the same number recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$)	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
Multiplication and division of fractions					
				multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$)
					multiply one-digit numbers with up to two decimal places by whole numbers
					divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)
Multiplication and division of decimals					
					multiply one-digit numbers with up to two decimal places by whole numbers
			find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths		multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places

					identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
					associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)
					use written division methods in cases where the answer has up to two decimal places
Problem solving					
		solve problems that involve all of the above	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 problems involving numbers up to three decimal places	
			solve simple measure and money problems involving fractions and decimals to two decimal places.	solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25.	
Ratio and proportion					
					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 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.

Statistics					
Interpreting, constructing and presenting data					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	interpret and construct simple pictograms, tally charts, block diagrams and simple tables	interpret and present data using bar charts, pictograms and tables	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	complete, read and interpret information in tables, including timetables	interpret and construct pie charts and line graphs and use these to 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				
Solving problems					
		solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	solve comparison, sum and difference problems using information presented in a line graph	calculate and interpret the mean as an average