

Maths

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Calculation

Beyond the Learning Journey, pupils will follow National Curriculum Key stage 1 and 2

[Mathematics programmes of study: key stages 1 and 2 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

All pupils will:-	Most pupils will:-	Some pupils will:-	A few pupils will:-
<p>MCA1 Experience, encounter and handle objects, liquids and materials in differing quantities</p> <p>MCA1i Experience, encounter and handle a variety of objects and show a response to those that are the same and different.</p> <p>MCA1ii Point selectively at objects without repetition</p>	<p>MCM1 Explore and begin to demonstrate an understanding of “more” and “less” in a variety of contexts and activities e.g playing in the ball pool, cooking, sand play, construction kits, snack time etc</p> <p>MCM1i Recognise same and different e.g photos, toys, numerals, shapes.</p> <p>MCM1ii Make collections of differing amounts.</p> <p>MCM1iii Count and rearrange collections in groups.</p> <p>MCM1iv Explore concept “less” in variety of contexts and activities.</p> <p>MCM1v Explore concept of “more” in variety of contexts and play.</p> <p>MCM1vi Estimate which has more or less e.g during sensory story, water play, playing with building blocks</p>	<p>MCS1 Compare small quantities using comparative language e.g. more/less, greater/fewer, smaller/larger .</p> <p>MCS1i From a given number given: number before, after, 1 more, 1 less using a number line.</p> <p>MCS1ii Add or take away one object and say how many now.</p> <p>MCS1iii Estimate quantities from own prior number knowledge.</p>	<p>MCF1 Compare quantities using more than/ greater than, less than/ fewer than</p>
<p>MCA2 Experience a variety of activities involving matching and</p>	<p>MCM2 Participate in a variety of activities pairing and matching items, noticing similarities and differences</p>	<p>MCS2 Begin to recognise small quantities without counting e.g. dice,</p>	<p>MCF2 Solve a range of number problems to 20 and beyond</p>

<p>grouping objects e.g. cars, sensory play, light room activities, messy play</p>	<p>e.g. pictures, photos, toys, numerals and shapes.</p> <p>MCM2i Identify same and different objects.</p> <p>MCM2ii Identify same and different pictures and photos.</p>	<p>numicon, dominoes, fingers (subitising).</p> <p>MCS2i Respond to questions using the vocabulary 'difference' e.g what is the difference between this row (3 cubes) and this row (5 cubes.)</p>	<p>beginning to recall addition facts, number pairs</p>
<p>MCA3 Experience activities and language relating to sharing, portioning and breaking into parts e.g. songs, snack time, sensory stories</p> <p>MCA3i Experience patterns in a variety of contexts e.g nature, seasons, words (ready steady go).</p> <p>MCA3ii Show anticipation for a sequence – what comes next e.g ready steady go</p>	<p>MCM3 Explore adding more to a group and taking away from a group, estimate which has more / less e.g during sensory stories, snack time, cooking, sand and water play, building with blocks, playing with cars etc</p> <p>MCM3i Sequence by looking, pointing, touching or naming.</p> <p>MCM3ii Follow a simple pattern using 2 objects e.g colour, shape.</p> <p>MCM3iii Identify patterns in a variety of contexts e.g nature.</p> <p>MCM3 iv Predict what comes next in a sequence.</p>	<p>MCS3 From a given number give: number before, number after, 1more, 1 less e.g. using number line, adding or taking away 1 object and counting how many there are now.</p> <p>MCS3i Begin to recognise a small quantity without counting e.g dice, Numcion, dominoes – subitise.</p> <p>MCS3ii Explore and represent patterns in numbers to 10.</p> <p>MCS3 iii Know doubles to 5 +5</p> <p>MCS3iv Know odd and even to 10</p> <p>MCS3v Add and subtract to 10 with concrete resources.</p> <p>MCS3vi Work out number bonds to 5 with resources e.g Numicon, fingers.</p> <p>MCS3vii Work out number bonds to 10 with concrete resources.</p> <p>MCS3viii Begin to respond to simple mathematical vocabulary e.g add, take away, add more</p>	<p>MCF3 Add and subtract one digit and two-digit numbers to 20 (9+9, 18-9)</p> <p>MCF3i Identify and use += symbols in number sentences and problems.</p> <p>MCF3ii Know double to 10 +10</p> <p>MCF3iii Solve real life problems that involve addition and subtraction using concrete pr pictorial methods.</p> <p>MCF3 iv Know number bonds to 10</p> <p>MVF3v Use strategies to bridge 10 and solve problems such as near doubles.</p>

<p>MCA4 Move objects with a specific purpose in a specific place e.g in a box, on a higher level</p>	<p>MCM4 Participate in activities comparing whole and parts experiencing and beginning to use simple language relating to sharing, portioning and breaking into parts e.g during snack time, playdough play, pretend pizza, sandcastles etc.</p> <p>MCM4i Stack, nest, connect and build with objects.</p> <p>MCA4ii Groups, stack, connect objects in groups that are the same amount.</p>	<p>MCS4ii Know quantities can be distributed equally.</p>	<p>MCF4 Solve simple real life problems that involve addition and subtraction using concrete objects, pictorial representation, missing numbers.</p> <p>MCF4i To know grouping large quantities into smaller known amounts makes easier counting.</p> <p>MCF4ii To know that repeated addition is multiplication e.g $3 \times 4 = 4+4+4$.</p> <p>MCF4ii Use known multiples to solve calculations.</p> <p>MCF4iii Use known multiples to solve simple problems.</p> <p>MCF4iv Identify and use symbols X and = in number sentences.</p>
<p>MCA5 Experience activities and language relating to sharing, portioning and breaking into parts e.g songs, snack time, sensory stories.</p>	<p>MCM5 Participate in activities comparing whole and parts and begin using simple language relating to sharing, portioning, breaking into parts .</p>	<p>MCS5 Begin to understand the concept of sharing e.g. giving a biscuit to each person, breaking wholes into parts e.g. cake, sandwich, apple etc...</p> <p>MCS5i Know half of a number by using doubles knowledge.</p> <p>MCS5ii Recognise half of a shape in an everyday context.</p>	<p>MCF5 Recognise quarter if a shape in everyday context.</p> <p>MCF5i Use half and double knowledge to solve simple problems.</p> <p>MCF5ii Identify and use symbols \div and = in number sentences.</p> <p>MCF5iii Know that you can only divide a bigger number into smaller parts.</p>
	<p>MCF6 Use money in role play situations.</p>	<p>MCS6 Use 1p coins to make amounts up to 10p e.g. playing shops customer / shop keeper.</p>	<p>MCF6 Know the value of coins up to £1</p>

		<p>MCS6i Recognise money by naming coins and notes.</p> <p>MCS6ii Know the value of coins up to 20 p</p>	<p>MCF6i Use money in simple mathematical calculations including simple practical problems.</p> <p>MCF6ii Choose coins/notes to make amounts up to £10 e.g when paying for items in a shop or working out change in a mini enterprise.</p>
			<p>MCF7 Begin to explore multiplication and division e.g. explore problems involving doubling and halving, multiplication as repeat addition i.e. 3×4 is $4+4+4$ and division as sharing.</p> <p>MCF7 i Identify and use +, -, x, ÷, = symbols in number sentences and problems.</p>
			<p>MCF8 Begin to understand, use and read a wide range of mathematical vocabulary in a variety of activities e.g. count, sequence, predict, multiple, most, least, order, share, halve, double, fraction, quarter, equal</p>

Number and Place Value

All pupils will:-	Most pupils will:-	Some pupils will:-	A few pupils will:-
<p>MNA1 Experience the language associated with counting and comparison e.g. encounter familiar number rhymes, songs, stories, games and snack activities.</p>	<p>MNM1 Engage with familiar number rhymes, songs, stories, games and shopping activities MNM1i beginning to anticipate / predict what comes next.</p> <p>MNM1ii Says the number names to 5 in the correct order (e.g. in a song or by joining in with the teacher) (PKSS)</p> <p>MNM1ii Distinguishes between 'one' and 'lots', when shown an example of a single object and a group of objects (PKSS)</p>	<p>MNS1 Count, by rote, to 10.</p> <p>MNS1i Count, by rote, to 10 backwards.</p> <p>MNS1ii Count, by rote, beyond 10</p> <p>MNS1iii Use teen numbers when counting by rote.</p> <p>MNS2 Continue a number string from any number to 10 by rote e.g 3456...</p>	<p>MNF1i Count, by rote, numbers to 100, e.g joining in counting, forwards and backwards</p> <p>MNF1ii Count on, by rote, from any given number to 100</p> <p>MNF1i Count, by rote, in different multiples including, twos, fives and tens, (up to x10 of the number)</p>
<p>MNA2 Respond to a range of objects by reaching for, looking at, pointing/eye pointing, tracking and touching.</p> <p>MNA2i Respond consistently to a range of objects developing sensory responses</p> <p>MNA2ii Explore object permanence</p> <p>MNA2iii scan objects in a sequential way</p>	<p>MNM2 Participate in activities with a purpose e.g., clapping, moving objects in response to an activity/song, signing along</p> <p>MNM2i To touch/point and pick up objects in a sequential way</p> <p>MNM2ii match objects in a sequence verbally or using AAC</p> <p>MNM2iii name objects in a sequence verbally or using AAC</p> <p>MNM2iv Seek a hidden object through scanning or touching.</p> <p>MNM2v Demonstrates an understanding of the concept of 1:1</p>	<p>MNS2 Use counting in play activities</p> <p>MNS2iii count objects in a sequence verbally or using AAC</p> <p>MNS2i Count with 1:1 correspondence up to 5</p> <p>MNS2ii Count with 1:1 correspondence up to 10</p>	<p>MNF2 Count with 1:1 correspondence teen numbers</p> <p>MNS2ii Recognise and sequence numbers to 20</p> <p>MNF2 To engage in a variety of activities designed to explore the properties of numbers up to 20</p> <p>MNF2ii follow a continuous number chain backwards and forwards to 20</p> <p>MNF2iii follow a broken number chain stopping and starting</p> <p>MNS2iv Use a number line to 10 (and beyond)</p>

	correspondence, e.g. giving one cup to each pupil (PKSS)		
<p>MNA3 Show anticipation of the next sound, item, action in a familiar sequence or activity e.g changing / greetings song, familiar sensory story.</p> <p>MNA3i Show anticipation for their own and others turns e.g., taking part in an adult lead turn taking games</p>	<p>MNM3 Engage in a variety of turn taking activities beginning to wait their turn and show anticipation / prediction of what comes next.</p> <p>MNM3i Copies and continues simple patterns using real-life materials, e.g., apple, orange, apple, orange, etc. (PKSS)</p>	<p>MNS3 Count on from any given number up to 5</p> <p>MNS3i Copies and continues more advanced patterns using real-life materials, e.g. apple, apple, orange, apple, apple, orange, etc. (PKSS)</p> <p>MNS3ii recognise quantities without counting up to 5 (be able to Subitise)</p> <p>MNS3iii Count on from any given number up to 10</p>	<p>MNF3 Reliably count higher numbers using different methods e.g moving objects, grouping, counting on</p> <p>MNF3i estimate an amount of objects before counting</p> <p>MNF3iii Identifies how many objects there are in a group of up to 10 objects, recognising smaller groups on sight and counting the objects in larger groups up to 10 (PKSS)</p>
<p>MNA4 Experience matching objects and objects being placed in groups e.g., playing with cars or soft toys, during snack time, exploring coloured objects.</p>	<p>MNM4 Match objects</p> <p>MNM4ii Use pictures, signs and numbers as labels.</p> <p>MNM4iii know a number name represents an amount</p> <p>MNM4iv sort and count objects in a variety of ways (rearranging, lining up objects, moving etc)</p> <p>MNM4v Begin to count small quantities more reliably up to 5 objects e.g moving up places in a game counting, Spoonfuls of flour as they are added etc.</p>	<p>MNS4 Use numbers as labels in play activities</p> <p>MNS4i Use numerals in play activities</p> <p>MNS4ii Recognise numerals by name</p> <p>MNS4iii Match quantities to numerals</p> <p>MNS4iv Recognise and sequence objects and numerals to 5</p> <p>MNS4v Recognise and sequence numerals to 10</p> <p>MNS4vi Use numbers and corresponding numerals to 10 in practical activities and games including computer activities, money, life skills activities etc</p>	<p>MNF4 Confidently number to 10</p> <p>MNF4i Demonstrates an understanding that the last number counted represents the total number of the count (PKSS)</p> <p>MNF4ii Confidently use numbers to 20</p> <p>MNF4iii Recognise and name 2-digit numbers</p>

		<p>MNS5 Know the value of a number out of sequence to 5</p> <p>MNS5i Know the value of a number out of sequence to 10</p>	<p>MNF5 Participate in a variety of activities exploring place value e.g using Numicon / tens and ones, expanding numbers into their 10s and ones, 100 square activities</p> <p>MNF5i Know the value of a digit within a numeral by the place it is in for all 1- and 2-digit numbers.</p> <p>MNF5ii Begin to know the place value of 2-digit numbers</p>
<p>MNA5 Look at pictures as part of choosing activities</p> <p>MNA5i Know pictures represent objects</p>	<p>MNM5 Begin to recognise numerals as opposed to text or pictures and that these represent a number name.</p>	<p>MNS5 know that marks can represent numbers of objects that have been counted</p> <p>MNS5i Record quantities e.g., writing numbers to 5, drawing objects, using pictures, symbols, showing fingers etc</p>	<p>MNF5 Read and write numbers from 1-20 in digits and in words</p> <p>MNF5i To read and write number to 100 in digits and words</p> <p>MNF5ii Respond to written numbers (AAC)</p>
		<p>MNS6 respond to ordinal numbers e.g., first, second third, last</p>	<p>MNF6i Use ordinal numbers</p>
	<p>MNM6 Handle and play with coins in a range of activities including shopping SSM?</p>	<p>MNS6 Begin to exchange coins or money in a role play game or shopping.</p>	<p>MMF7 To Recognise and know the value of 1p - £2 coins and begin to recognise £5 and £10 notes use money for a range of purposes and in different situations e.g waiting for change, saving for a toy.SSM?</p>

Geometry-Shape and Position

All pupils will:-	Most pupils will:-	Some pupils will:-	A few pupils will:-
<p>MGA1 Begin to develop attention skills using vision and touch to experience a range of objects and shapes e.g., recycled boxes, balls, cylinders</p> <p>MGA1ii Locating objects through auditory input</p>	<p>MGM1 Engage in intentional exploration with different shapes and objects. E.g container play, peg board / inset puzzles, rolling, building with bricks, playing with playdough, lining up objects, etc</p>	<p>MGS1 Explore 2D & 3D shapes in a variety of play and activities e.g., sorting, stacking, balancing and rolling shapes, playing games, making pattern / pictures from shape, building models.</p> <p>MGS1i Select suitable shapes for building i.e shapes with flat surfaces.</p>	<p>MGF1 Name and find 3D shapes e.g., Naming 3D shapes in everyday objects, making a collection of cylinders from around the school, explaining which shapes were used to create a model.</p>
<p>MGA2 Participate in container play e.g. placing objects in and out of a container in imitation, pouring sand and water out of a container.</p> <p>MGA2i Touch objects in a sequential manner</p> <p>MGA2ii Begin to line up blocks or toys</p>	<p>MGM2 Match and sort objects and pictures by shape, form or colour.</p> <p>MGM2i Begin to stack cups or blocks.</p>	<p>MGS2 Begin to name and find 2D shapes e.g., respond to show me the circle, what is the name of this shape?</p> <p>MGS2i Begin to name some 3D shapes.</p>	<p>MGF2 Investigate and identify the properties of simple 3D shapes e.g., find shapes that roll/slide, select</p> <p>MGF2i Describe a shape by its attributes,</p> <p>MGF2ii sort / match shapes by - those with square faces, those with curved faces, the number, sort between 2D (flat) and 3D solid shapes, of faces, vertices or edges they have.</p>
<p>MGA3 Demonstrate an interest in people and objects beginning to move and track things in a variety of ways e.g track objects through a horizontal / vertical plane, in</p>	<p>MGM3 Intentional mark making of vertical and horizontal lines</p> <p>MGM3i Begin to trace simple 2D shapes</p> <p>MGM3ii Begin to copy and simple 2D shapes e.g in sand, shaving</p>	<p>MGS3 Begin to independently draw a simple shape.</p>	<p>MGF3 Use 2D and 3D shapes in a creative way e.g., design and copy simple patterns or pictures using shapes, draw specified shapes, explore pattern with pegboards, explore symmetry, tessellation</p>

circular movements, watch people with interest.	foam, on the computer, with a pencil etc.		and repeating patterns, draw shapes on the computer.
		MGS4 Identify shapes within objects and pictures e.g., recognizing shapes in photos, shape hunts around the school, recognizing faces on 3D shapes.	MGF4 Begin to use and respond to geometric language both in the classroom and in the wider environment e.g., describing something that they have seen, planning what they would like to make, discussing patterns in nature, describe the attributes of 2D and 3D shapes: flat, curved, round, straight, solid,
MGA5 Experience a variety of activities to encourage the development of object permanence e.g. watch when an object is hidden; experience the retrieval of the hidden object, beginning to look for an object that has been moved out of their field of vision or hidden in a container.	MGM5 Develop a clear understanding of object permanence (e.g. Find an object in its usual place, look for it when moved somewhere else/ dropped.)	MGA5 Begin to show an awareness of the location of familiar objects e.g., coats on pegs, books in the box, favourite toys.	
MGA6 Observe and begin to repeat an action that has had an effect e.g., shaking or squeezing an object, stacking objects and knocking them down, pressing a switch, touching some chime bars, throwing, and dropping objects etc	MGM6 Explore the use of positional language in context. MGM6i React or respond to positional language e.g., up, down in a hoist.	MGS6 Explore the placement of an object beginning to use terms such as on, under, off, next to, in, out, in front of, behind, at the bottom, on top e.g., MGS6i following instructions to place toys with varying key word	MGF6 Demonstrate an understanding of prepositional language in relation to people and objects e.g. placing self or objects where requested, MGF6i giving others instructions with multiple key words, describe

<p>MGA5i Expose to positional language e.g., up, down in a hoist.</p>		<p>levels, playing with cars, following instructions to tidy away.</p>	<p>positions in a picture, copying a model.</p>
<p>MGA7 Showing an awareness of your own body in relation to your surroundings. E.g through massage stories and TACPAC, Sherbourne</p> <p>MGA7i Intentional movement of your own body.</p>	<p>MGM7 Engage in a range of activities (such as dance / PE/ swimming) to explore movement e.g., following instruction to stop, go, up, fast and slow, moving cars / balls in different ways.</p>	<p>MGS7 Understand spatial words in play or stories using in, on, under, off, up, down, through e.g water play, trains and tunnels,</p>	<p>MGF7 Demonstrate an understanding of movement language in relation to people and objects e.g., move around the room as requested/ give directions to others, maze work, programming a robot/ coding, exploring the movement of vehicles or rides.</p> <p>MGF7i Explore the movement of an object beginning to use terms such as forwards, backwards, quickly, slowly, up, down e.g computer coding work, remote control vehicles, grid work, cars, boats, PE activities.</p> <p>MGF6ii Respond to directional language e.g left, right</p> <p>MGF6iii Give and use directional language.</p>
<p>MGA8 Participate in adult lead repetitive / turn taking games where an adults stops to wait for a response e.g. intensive interaction, action songs</p>	<p>MGM8 Take turns actively e.g., rolling ball to a partner passing objects backwards and forwards.</p> <p>MGS8i Recognise and copy simple patterns e.g., clapping, making sounds</p>	<p>MGS8 Copy simple patterns using objects, beads, bricks, shapes etc</p>	<p>MGF8 Continue, copy and create repeating patterns</p>

Measure

All pupils will:-	Most pupils will:-	Some pupils will:-	A few pupils will:-
<p>MMA1 Comparing measures Experience and encounter objects and materials of differing length, size, capacity and weight through everyday activities e.g. sand and water play, cooking, building blocks, carrying bags.</p>	<p>MMM1 Explore a range of objects of a differing sizes, weights and volume e.g by trying, fitting, storing, matching, comparing, filling and emptying.</p>	<p>MMS1 Make practical use of judgements of size e.g. trying items on, fitting items in gaps, matching, filling and emptying.</p>	<p>MMF1 Solve practical problems for lengths and weights e.g. halving/doubling cooking ingredients.</p>
<p>MMA2 Practical comparison of size Encounter and respond to comparisons of differing length, size and weight.</p>	<p>MMM2 Engage in practical activities to compare size.</p> <p>MM2i Order objects by size in a practical activity.</p>	<p>MMS2 Use practical comparisons to order up to 3 objects by size or length.</p>	<p>MMF2 Compare order and sequence length, weight and capacity e.g. compare volume of 3 containers</p>
<p>MMA3 Use comparative language Experience and respond to language of measure e.g. big/small, long/short, hot/cold.</p>	<p>MGM3 Respond to requests using simple comparative language e.g give me the big ball.</p> <p>MMM3i Begin to use simple comparative language to describe objects e.g. big, small, long, short.</p>	<p>MMS3. Begin to use comparative language when making comparisons during activities such as sand and water play, using construction kits, playing with cars etc e.g. heavy, light, full, empty, long, short.</p>	<p>MMF3 Measure and begin to record weight, length and capacity using non-standard units</p>

<p>MMA4 Passage of time Experience, routines and the passage of time, including waiting times.</p>	<p>MMM4 Appreciate passage of time including waiting times.</p>	<p>MMS4 Compare and describe time using symbols, signs or verbal e.g earlier, later</p>	<p>MMF4 Compare describe and solve practical problems for time i.e. earlier, later. How many jumps in a minute</p>
<p>MMA5 Daily routines Remember simple learned responses over a period of time.</p>	<p>MMM5 Develop an increasing awareness of routines and the passage of time e.g. now, next, later, before, visual timetable</p>	<p>MMS5 Be able to recognise familiar daily routines and be able to talk about what has happened before and what comes after.</p>	<p>MMF5 Responds appropriately to time-based terminology, e.g. we will do that in the morning, where are we going after lunch</p>
<p>MMA6 Calendar Have an awareness of Weeks/months/days/years</p>	<p>MMM6 Understand that weekdays and weekends are different</p>	<p>MMS6 Become familiar with the days of the week and begin to link activities to particular days.</p>	<p>MMF6 Recognise and use language relating to dates including days of the week, months and year</p>