



Year 1
learning
guide

Maths

What will be covered in year 1



By the end of Year 1, children are expected to have been taught...

Number – number and place value

Statutory requirements

Pupils should be taught to:

- count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens
- given a number, identify one more and one less
- identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least
- read and write numbers from 1 to 20 in numerals and words.

Number – addition and subtraction

Statutory requirements

Pupils should be taught to:

- read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.

Number – multiplication and division

Statutory requirements

Pupils should be taught to:

- 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.

Number – fractions

Statutory requirements

Pupils should be taught to:

- recognise, find and name a half as one of two equal parts of an object, shape or quantity
- recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

Measurement

Statutory requirements

Pupils should be taught to:

- compare, describe and solve practical problems for:
 - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
 - mass/weight [for example, heavy/light, heavier than, lighter than]
 - capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
 - time [for example, quicker, slower, earlier, later]
- measure and begin to record the following:
 - lengths and heights
 - mass/weight
 - capacity and volume
 - time (hours, minutes, seconds)
- recognise and know the value of different denominations of coins and notes
- sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]
- recognise and use language relating to dates, including days of the week, weeks, months and years
- tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.

Geometry – properties of shapes

Statutory requirements

Pupils should be taught to:

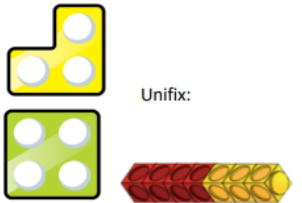
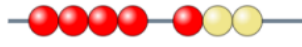


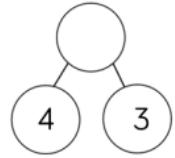


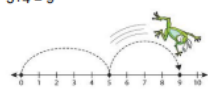
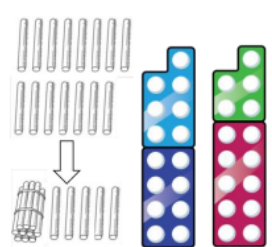
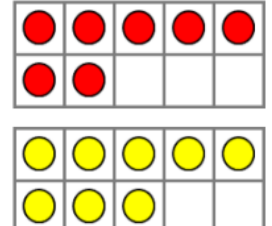
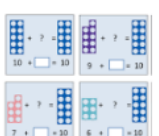
- recognise and name common 2-D and 3-D shapes, including:
 - 2-D shapes [for example, rectangles (including squares), circles and triangles]
 - 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].

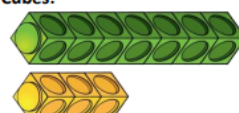

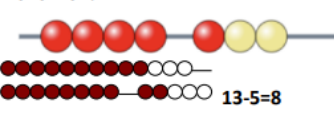
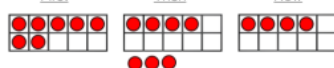
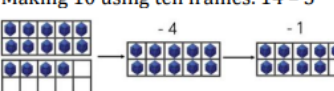


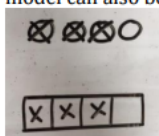
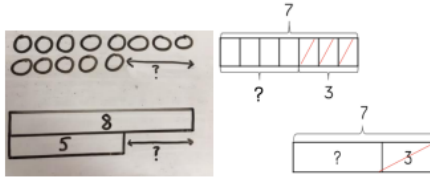
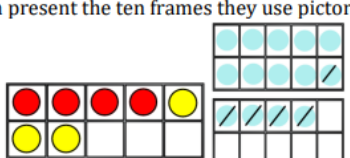
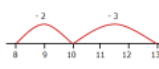
Geometry – position and direction

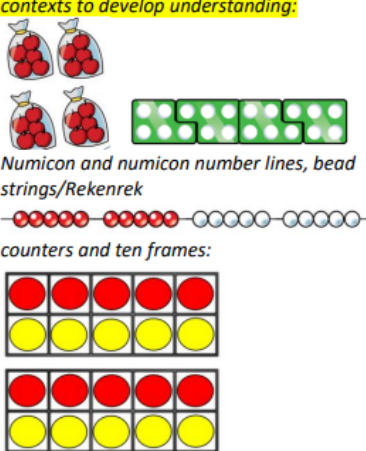
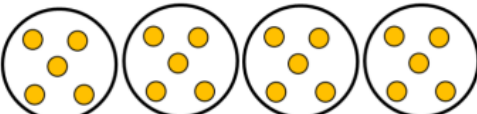
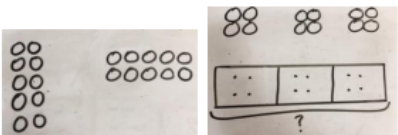
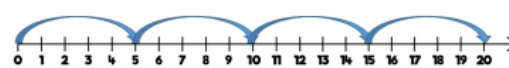
Statutory requirements



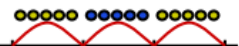

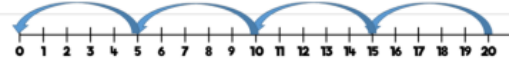
Pupils should be taught to:

- describe position, direction and movement, including whole, half, quarter and three-quarter turns.

+	Skill:	Concrete:	Pictorial:	Abstract:
Y 1	<p>Add one-digit numbers within 10</p> <p>Add one and two-digit numbers to 20</p> <p>Read/write/interpret statements involving addition (+) and equals (=) signs.</p>	<p>Pupils use concrete objects: Plastic animals, counters, straws, Numicon:</p>  <p>Unifix:</p> <p>Rekenreks:</p>  <p>Alongside pictorial charts and mats:</p> <p>Ten frames, part-whole models, Place Value Charts, Hungarian ten frames</p>  <p>Numicon tens number line:</p>  <p>Problems should include terms: part-part whole, put together, add, altogether, total, take away, distance between, more than and less than, so pupils develop concept of +/- and use operations flexibly.</p>	<p>Pictorial:</p>    <p>Children draw part-whole models (top image), discrete (middle image) and continuous bar models (bottom image).</p> <p>Children also represent counters and ten frames and beads on a Rekenrek.</p> <p>Progress from counting on in ones to bigger, efficient jumps using Rekenreks and number lines. Draw jumps on marked and blank number lines: $5 + 4 = 9$</p>  <p>When adding one-digit numbers that cross 10, it is important to highlight the importance of ten ones equalling one ten. In Year 1, this is only done just by counting on. Children make own pictorial representations:</p> <p>$8 + 7 =$</p>  	<p>Represent/use number bonds (and related subtraction facts) within 20.</p> <p>Missing number problems (eg $16 = ? + 9$)</p>  <p>Memorise/reason with bonds to 20 in several forms (eg $9 + 7 = 16$; $16 - 7 = 9$; $7 = 16 - 9$). Pupils should realise the effect of adding or subtracting zero and establish +/- as related operations.</p> <p>Pupils combine and increase numbers, counting forwards and backwards.</p> <p>Part + part = whole</p> <p>Operation symbol (plus sign) Sum/total</p> <p>$12 + 4 = 16$</p> <p>Addends Equality symbol (equal sign)</p>

Y R 1	<p>Subtract 1 digit numbers within 10</p> <p>Subtract 1 and 2 digit numbers to 20</p> <p>Read/write/interpret statements involving subtraction (-) and equals (=) signs</p>	<p>Children use concrete resources to find the difference or take-away, including: e.g. to do $7 - 3$:</p> <p>Cubes:</p>  <p>Numicon:</p>  <p>Rekenrek:</p>  <p>$13 - 5 = 8$</p> <p>Ten frames and counters:</p> <p>First Then Now</p>  <p>Making 10 using ten frames. $14 - 5$</p>  <p>Use number tracks and number lines to count on/ back (find the difference):</p>  <p>Introduce Bar Model with real objects:</p> 	<p>Children draw the concrete resources they are using and cross out the correct amount. The simple bar model can also be used:</p>  <p>Children draw part-whole models and bar models: draw the cubes/counters/other concrete objects which they have used or bar model to illustrate what they need to calculate.</p>  <p>Children present the ten frames they use pictorially:</p>  <p>Draw number lines: Progress from counting back in 1s to more efficient jumps: $13 - 5 = 8$</p> 	<p>In Year 1, subtracting one-digit numbers that cross 10, is done by counting back, using objects, number tracks and number lines.</p> <p>Memorise/reason with bonds to up to 10, then 20 in several forms (eg $9 + 7 = 16$; $16 - 7 = 9$; $7 = 16 - 9$). Pupils should realise the effect of adding or subtracting zero - establishes +/- as related operations.</p> <p>Pupils combine and increase numbers, counting forwards and backwards in larger jumps (not just ones) to find the difference.</p> <p>Children record subtraction number sentences in books:</p> <p>$20 - 4 = 16$</p> <p>Whole - part = part</p> <p>minuend subtrahend difference</p> <p>$13 - 4 = 9$</p> <p>subtraction sign equals</p>
-------------	---	---	--	---

<p>Yr1: Solve one-step problems using concrete objects, pictorial representations and arrays (with the support of the teacher)</p> <p>Count in steps of 2, 5 and 10</p> <p>Yr2: Calculate statements for multiplication within the 2x, 5x, 10x and 3x multiplication tables and write them using the multiplication and equals signs.</p> <p>[Show multiplication of two numbers can be done in any order.]</p>	<p>Use concrete resources and real objects and contexts to develop understanding:</p>  <p>Numicon and numicon number lines, bead strings/Rekenrek</p> <p>counters and ten frames:</p> <p>, bead strings., number tracks and number lines. Build arrays with counters.</p>	<p>Encourage children to draw equal groups of:</p>  <p>Encourage children to draw arrays, bar models and other representations:</p>  <p>Draw jumps on marked and blank number lines:</p> 	<p>In year 1 children count in steps of 2, 5 and 10</p> <p>Children represent multiplication as repeated addition:</p> $5 + 5 + 5 + 5 = 20$ <p>They are not expected to record multiplication using x symbol.</p> <p>In Year 1, children use concrete and pictorial representations to solve problems.</p> <p>In Year 2, children are introduced to the multiplication symbol:</p> $4 \times 5 = 20$ $5 \times 4 = 20$ <p>... groups of ...=...</p> <p>Multiplication:</p> $6 \times 3 = 18$ <p>Factor (or Multiplier) Factor (or Multiplicand) Product</p>
---	--	---	---

<p>Yr1: Solve one step problems using multiplication (sharing)</p> <p>Yr2: Recall & use division facts for the 2,3, 5 and 10 multiplication tables. Calculate statements within the multiplication tables and write them using the division and equals signs. [Show division of two numbers cannot be done in any order.]</p>	<p>Use concrete and real objects in real life contexts:</p>  <p>Children use sharing circles and part-whole and bar model mats to share counters, numicon and base ten equally:</p>  <p>Link division to multiplication by creating arrays and thinking about the number sentences that can be created.</p>	<p>Draw arrays and number lines (first modelled using Numicon and Number lines/ beads/ rekenreks/counters/objects)</p> $15 \div 5 = 3$  <p>Draw part-whole and bar models: Grouping on a number line:</p>  $10 \div 5 = ?$ $5 \times ? = 10$ 	<p>In Year 1, children use concrete and pictorial representations to solve problems. They are not expected to record division formally.</p> <p>Children solve problems by grouping and counting the number of groups. Grouping encourages children to count in multiples and links to repeated subtraction on a number line. They can use concrete representations in fixed groups such as number shapes which helps to show the link between multiplication and division.</p> <p>In Year 2, children are introduced to the division symbol:</p> <p>12 shared between 3 is 4</p> $12 \div 3 = 4$
---	---	---	--

Literacy—writing

By the end of each term, children are expected to...

Autumn Term

Most letters formed correctly
Spell words by segmenting sounds
Use CL for names and 'I'
Attempt to use CL and FS
Leaving finger spaces
Begin to use adjectives to describe a noun
Attempt to use simple past tense verbs using 'ed'

Spring Term

Sometimes using CL and FS correctly
Attempt to use ? !
Begin to write simple sentences
Use adjectives to describe a noun
Begin to use verbs for an action
Sometimes use 'and' to join ideas
Sometimes use because/but
Begin to use time connectives to sequence
Begin to use past tense correctly using 'ed'

Summer Term

Mostly use CL and FS accurately
Sometimes using ? !
Write simple sequenced sentences
Use adjectives, nouns and verbs
Often using the conjunctions - and, but, because
Use time connectives to sequence
Sometimes using past tense correctly using 'ed' and some irregular verbs
Spell plurals with s/es

Literacy—reading

By the end of the year children should...















Y1	
Decoding/ Fluency	<p>respond with the correct sound to graphemes for all 40+ phonemes</p> <p>read accurately by blending sounds</p> <p>read a range of simple common exception words e.g. the, said, they, once, she, friend, school</p> <p>read words with the endings -s, -es, -ing, -ed and -est.</p> <p>read words of more than one syllable containing known GPCs</p> <p>read contractions e.g. I'm, can't, we'll</p> <p>read pseudo words, including digraphs and trigraphs</p> <p>recite some familiar complete rhymes and songs by heart</p> <p>reading 60 wpm</p> <p>quickly recognise when reading has not made sense re-reading and self-correcting without prompting</p>
Vocabulary	<p>discuss word meanings, linking new meanings to those already known</p> <p>draw upon knowledge of vocabulary to understand the text</p> <p>join in with predictable phrases</p> <p>use vocabulary given by the teacher</p> <p>discuss favourite words and phrases</p> <p>join in automatically with predictable phrases</p> <p>discuss and clarify meaning of more challenging words</p>
Inference	<p>make simple inferences about characters' feelings by using what they say as evidence</p> <p>infer simple points with reference to the pictures and words in the text</p> <p>discuss the title and events</p> <p>demonstrate simple inference from the text based on what is said and done</p> <p>make inferences with confidence referring to the text</p>
Prediction	<p>predict what might happen based on what has been read about the story, character and plot</p> <p>make simple predictions based on the story and on their own life experience</p> <p>begin to explain these ideas verbally or through pictures</p>
Explain	<p>give opinion including likes and dislikes</p> <p>link what has been read or heard own experiences</p> <p>explain their understanding of what has been read</p> <p>express views about events or characters</p> <p>clearly explain their understanding of what has been read</p>
Retrieval	<p>answer questions about what has just happened in a story</p> <p>recognise characters, events, titles and information</p> <p>recognise differences between fiction and non-fiction texts</p> <p>retrieve information by finding a few key words</p> <p>contribute ideas and thoughts in discussion</p>
Sequence	<p>retell familiar stories orally e.g. fairy stories and traditional tales</p> <p>sequence the events of a familiar story</p> <p>begin to discuss how events are linked</p> <p>securely know a range of stories, retelling them orally independently without support</p>

Children should be able to read
these.....

Year 1 Common Exception Words (NC)		
the	a	do
to	today	of
said	says	are
were	was	is
his	has	I
you	your	they
be	he	me
she	we	ask
go	so	no
by	my	here
there	where	friend
love	come	some
one	once	school
put	push	
pull	full	
house	our	

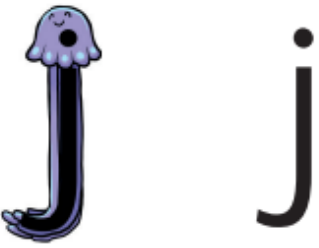
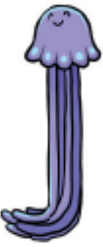










Phase 2 grapheme information sheet

Autumn 1









Grapheme and mnemonic	Picture card	Pronunciation phrase	Formation phrase
 s	 snake	Show your teeth and let the s hiss out ssssss ssssss	Down the snake from head to tail.
 a	 astronaut	Open your mouth wide and make the a sound at the back of your mouth a a a	Around the astronaut's helmet and down into space.
 t	 tiger	Open your lips; put the tip of your tongue behind your teeth and press t t t	Down the tiger and across its neck.
 p	 penguin	Bring your lips together, push them open and say p p p	Down the penguin's back, up and around its head.
 i	 iguana	Pull your lips back and make the i sound at the back of your mouth i i i	Down the iguana and dot the leaf.
 n	 net	Open your lips a bit, put your tongue behind your teeth and make the nnnnn sound nnnnn	Down, up and over the net.
 m	 mouse	Put your lips together and make the mmmmm sound mmmmm	Down, up and over the mouse's ears.

Phase 2 grapheme information sheet



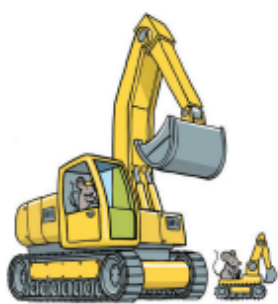
Autumn 2



Grapheme and mnemonic	Picture card	Pronunciation phrase	Formation phrase
	 jellyfish	Pucker your lips and show your teeth use your tongue as you say j j j	Down the jellyfish and dot its head.
	 volcano	Put your teeth against your bottom lip and make a buzzing v v v v v v v v v v	Down to the bottom of the volcano and back up to the top.
	 wave	Pucker your lips and keep them small as you say w w w w	Down and up and down and up the waves.
	 box	Mouth open, then push the cs/x sound through as you close your mouth cs cs cs (x x x)	From the top, across the box to the bottom. From the top again across the box to the bottom.
	 yo-yo	Smile, tongue to the top of your mouth, say y without opening your mouth yyy	Down, around the yo-yo and curl round the string.
	 zebra	Show me your teeth and buzz the z sound zzzzz zzzzz	Across the top of the zebra's head, zig-zag down its neck and along.

How to say the Phase 3 sounds

Grapheme	Catchphrase	Pronunciation phrase	Grapheme	Catchphrase	Pronunciation phrase
ai	 tail in the rain	Open your mouth wide and say ai ai ai	oo	 hook a book	Pucker your lips and keep them small as you say oo oo oo
ee	 sheep in a jeep	Smile with your lips apart and say ee ee ee	oo	 zoom to the moon	Open your mouth just a bit, put your hand on your tummy, pull your tummy in and say oo oo oo
igh	 a light in the night	Open your mouth in a relaxed way and say igh igh igh	ar	 march in the dark	Open your mouth wide, push your tongue down and say ar ar ar
oa	 soap that goat	Make an 'o' with your mouth and say oa oa oa	or	 born with a horn	Make an 'o' with your mouth, push your tongue down and say or or or

Grapheme	Catchphrase	Pronunciation phrase
ur	 <p>curl the fur</p>	Open your mouth in a relaxed way, push your tongue down and say ur ur ur
ow	 <p>wow owl</p>	Open your mouth wide then move your lips together as you say ow ow ow
oi	 <p>boing boing</p>	Make an 'o' with your mouth then move your lips out as you say oi oi oi





























Grapheme	Catchphrase	Pronunciation phrase
ear	 <p>get near to hear</p>	Smile with your lips apart, push your tongue to your teeth as you say ear ear ear
air	 <p>chair in the air</p>	Open your mouth wide, push your tongue down as you say air air air
er	 <p>a bigger digger</p>	Open your mouth in a relaxed way, push your tongue down and say ur ur ur

Grapheme	Catchphrase	Pronunciation phrase	Phase 5 Graphemes
ear	 <p>get near to hear</p>	Smile with your lips apart, push your tongue to your teeth as you say ear ear ear	ere ear
air	 <p>chair in the air</p>	Open your mouth wide, push your tongue down as you say air air air	are ere ear
zh		Pucker your lips and show your teeth; push the air over your tongue as you say zh zh	su si

*depending on regional accent














Grow the code grapheme mat

Phase 2, 3 and 5

 s ss c se ce st sc	 t tt	 p pp	 n nn kn gn	 m mm mb	 d dd	 g gg	 c k ck cc ch	 r rr wr	 h
 b bb	 f ff ph	 l ll le al	 j g dge ge	 v vv ve	 w wh	 x	 y	 z zz s se ze	 qu
 ch tch ture	 sh ch ti ssi si ci	 th	 ng	 nk	 a	 e ea	 i y	 o a	 u o-e ou

Grow the code grapheme mat

Phase 2, 3 and 5

 ai ay a a-e eigh aigh ey ea	 ee ea e e-e ie y ey	 igh ie i i-e y	 oa o o-e ou oe ow	 oo ue u-e ew ou ui	yoo ue u u-e ew	 oo u* oul	 ar a* al*
 or aw au aur oor al a oar ore	 ur er ir or	 ow ou	 oi oy	 ear ere eer	 air are ere ear	zh su si	

*depending on regional accent

How to write capital letters

Use this document to ensure correct letter formation when you are teaching children to form capital letters.

Letter	Capital letter formation phrase
A	From the top, diagonally down to the left, up to the top, diagonally down to the right. Lift up and across.
B	From the top, down, back to the top. Round to the middle, round to the bottom.
C	From the top, curl around to the left to sit on the line.
D	From the top, down, back to the top. Curve right, down to the bottom.
E	From the top, down, back to the top. Across, back. Lift up and across the middle. Lift up and across the bottom line.
F	From the top, down, back to the top. Across, back. Lift up and across the middle.
G	From the top, curl around to the line, carry on up, then straight down. Lift up and across.
H	From the top and down. Space. From the top and down. Lift up and join the lines across the middle.
I	From the top to the bottom and stop.
J	From the top, all the way down, then short curl to the left.
K	From the top, down, up to the middle. Diagonally up, back and diagonally down to the line.
L	From the top, down and across the line.
M	From the top, down, back to the top. Diagonally down, diagonally up. Straight down to the line.
N	From the top, down, back to the top. Diagonally down, then straight up to the top.
O	From the top – all around the o.
P	From the top, down then back up. Curve right to halfway down.
Q	From the top – all around the o. Lift off. Short line diagonally down.
R	From the top, down, then back up. Curve right to halfway down. Diagonally down to the line.
S	From the top, under the snake's chin, slide down and round its tail.
T	From the top, down and stop. Lift up and from the left, make a line across the top.
U	From the top, down and curve right, then straight up to the top.
V	From the top diagonally right to the bottom, then diagonally up to the top.
W	From the top diagonally right to the bottom, diagonally up to the top, diagonally down to the line, then diagonally up again.
X	From the top, diagonally right to the bottom. Space. Start at the top, then diagonally left to the bottom.
Y	From the top diagonally right to the middle. Space. From the top diagonally left to the middle. Straight down to the bottom.
Z	From the top go across, diagonally down to the left and across the bottom.