

# Curriculum Progression Document Maths



'Roots to Grow and Wings to Fly'

# St Bartholomew's Maths Curriculum

#### **INTENT**

We believe that all children should have:

- A secure understanding of maths and number.
- A positive and resilient attitude towards mathematics and an awareness of the fascination of mathematics.
- Competence and confidence in mathematical knowledge, concepts and skills.
- An ability to solve problems, to reason, to think logically and to work systematically and accurately.
- A range of learning strategies: working both collaboratively and independently.
- Fluency in mathematics where children can express ideas confidently and talk about the subject using mathematical language.
- An understanding of the importance of mathematics in everyday life.
- Independent learners who take responsibility for their own learning.

#### **IMPLEMENTATION**

Our maths curriculum aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics through placing number and core skills at the heart of our curriculum with daily practice to ensure fluency of number facts
- rehearse and revisit core skills to ensure that recall is fluent and learned written methods are independently used
- reason mathematically by following a line of enquiry through ensuring discussion plays a vital role in all lessons
- are actively encouraged to discuss with peers and teachers using mathematical language
- can solve problems by ensuring problem solving is embedded in every unit and variation of questions are used to enable children to apply their knowledge to different situations

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## **EYFS MATHS Curriculum Overview**

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Autumn 1The children will acquire a deep und number bonds up to five and some different contexts, recognising when and how quantities can be distribut• Understanding of Numbers to 5• Subitise to 5 (recognising quantities without counting)• Number Recognition and Formation• Early Addition (One More)• Comparing two quantities• Early Subtraction (One Less)• Time (My day)	Autumn 2         Jerstanding of number to 10. They will lead number bonds to 10, including double faits in one quantity is greater than, less than or ed evenly. <ul> <li>Understanding of Numbers to 5</li> <li>Subitise to 5 (recognising quantities without counting)</li> <li>Number Recognition and Formation</li> <li>Early Addition (One More)</li> <li>Comparing two quantities</li> <li>Early Subtraction (One Less)</li> <li>Time (My day)</li> </ul>	Spring 1 ann about the composition of each nur cts. The children will learn to count ver or the same as the other quantity. The Understanding of Numbers to 10 Introducing zero Subitise (recognising quantities without counting) to 5 Recall number bonds to 5/10 Addition – combining two groups to find the whole Exploring Bonds to 10 Subtraction Knowledge of more and less and distribution of quantities evenly Spatial awareness 2D Shape	Spring 2 mber. They will learn to subitise (recor- rbally beyond 20, recognising the patt children will explore and represent par- Understanding of Numbers to 10 Untroducing zero Subitise (recognising quantities without counting) to 5 Recall number bonds to 5/10 Addition – combining two groups to find the whole Exploring Bonds to 10 Subtraction Knowledge of more and less and distribution of quantities evenly Spatial awareness 2D Shape	Summer 1 gnise quantities without counting) to tern of the counting system. They will atterns with numbers up to 10, includ Counting to 20 Understanding of Numbers to 10 Introducing zero Subitise (recognising quantities without counting) to 5 Recall number bonds to 5/10 Addition – combining two groups to find the whole Exploring Bonds to 10 Subtraction Knowledge of more and less and distribution of quantities evenly Making simple	Summer 2 five. They will automatically recall compare quantities up to 10 in ing odds and evens, double facts Counting to 20 Understanding of Numbers to 10 Introducing zero Subitise (recognising quantities without counting) to 5 Recall number bonds to 5/10 Addition – combining two groups to find the whole Exploring Bonds to 10 Subtraction Knowledge of more and less and distribution of quantities evenly Making simple
		<ul> <li>Spatial awareness</li> <li>2D Shape</li> <li>3D Shape</li> </ul>	<ul> <li>Spatial awareness</li> <li>2D Shape</li> <li>3D Shape</li> </ul>	<ul> <li>quantities evenly</li> <li>Making simple patterns and exploring more complex patterns</li> <li>Doubling</li> <li>Halving &amp; sharing</li> <li>Odds and evens</li> <li>Length, height and distance</li> <li>Weight</li> <li>Capacity</li> </ul>	<ul> <li>quantities evenly</li> <li>Making simple patterns and exploring more complex patterns</li> <li>Doubling</li> <li>Halving &amp; sharing</li> <li>Odds and evens</li> <li>Length, height and distance</li> <li>Weight</li> <li>Capacity</li> </ul>

## **EYFS Maths Vocabulary**

NUMBER	PLACE VALUE	ESTIMATING
zero	ones	guess
number	tens	how many?
one, two, three to twenty and	digit	estimate
beyond	the same number as, as many as	nearly
teens numbers, eleven, twelve	more, larger, bigger, greater	close to
twenty	fewer, smaller, less	about the same as
none	fewest, smallest, least	just over, just under
how many?	most, biggest, largest, greatest	too many, too few
count, count (up) to, count on (from,	one more, ten more	enough, not enough
to), count back (from, to)	one less, ten less	
count in ones, twos, fives, tens	compare	
is the same as	order	
more, less	size	
odd, even	first, second, third twentieth	
few	last, last but one	
pattern	before, after	
pair	next	
	between	

ADDITION AND SUBTRACTION	MULTIPLICATION AND DIVISION	FRACTIONS
add, more, and	sharing	parts of a whole
make, sum, total	doubling	half
altogether	halving	quarter
double	number patterns	
one more, two more ten more		
how many more to make?		
how many more is than?		
how much more is?		
take away		
how many are left/left over?		
how many have gone?		
one less, two less, ten less		
how many fewer is than?		
how much less is?		
difference between		
MEASURE	LENGTH	WEIGHT
measure, size	metre	weigh, weighs, balances
compare	length, height, width, depth	heavy, light
guess, estimate	long, short, tall, high, low	heavier than, lighter than
enough, not enough	wide, narrow, thick, thin	heaviest, lightest
too much, too little, too many, too few	longer, shorter, taller, higher, longest,	scales
nearly, close to, about the same as	shortest, tallest, highest	
just over, just under	far, near, close	

CAPACITY AND VOLUME	TIME	MONEY
full	time	money
empty	days of the week, Monday, Tuesday	coin
half full	day, week	penny, pence, pound
holds	birthday, holiday	price, cost
container	morning, afternoon, evening, night	buy, sell
	bedtime, dinner time, playtime	spend, spent
	today, yesterday, tomorrow	рау
	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	
PROPERTIES OF SHAPE	2D Shape	3D Shape
shape, pattern	corner, side	face, edge, vertex, vertices
flat, curved, straight	rectangle (including square)	cube
round, hollow, solid	circle	pyramid
sort, make, build, draw	triangle	sphere
size, bigger, larger, smaller		cone
symmetrical		
pattern, repeating pattern		
match		

POSITION AND DIRECTION	STATISTICS	GENERAL
position	count, sort	pattern
over, under, above, below	group, set	puzzle
top, bottom, side	list	what could we try next?
on, in, outside, inside		how did you work it out?
around, in front, behind		recognise
front, back, beside, next to		describe
opposite		draw
apart		compare
between		sort
middle, edge		
corner		
direction		
left, right, up, down		
forwards, backwards, sideways		
across		
next to, close, near, far		
along		
through		
to, from, towards, away from		
movement		
slide, roll, turn		
stretch, bend		
whole turn, half turn		

## KS1 Curriculum Overviews

## YEAR 1

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Count to and across 100,	Recognise and know the	Count to and across 100,	Recognise, find and name a	Compare, describe and solve	Describe position, direction
forwards and backwards,	value of different	forwards and backwards,	half as one of two equal	practical problems for	and movement, including
beginning with 0 or 1, or	denominations of coins and	beginning with 0 or 1, or	parts of an object, shape or	lengths and heights [for	whole, half, quarter and
from any given number.	notes	from any given number.	quantity.	example, long/short,	three-quarter turns.
				longer/shorter, tall/short,	
Count, read and write	2-D shapes [for example,	Count, read and write	Recognise, find and name a	double/half]	Compare, describe and solve
numbers to 100 in numerals;	rectangles (including	numbers to 100 in numerals;	quarter as one of four equal		practical problems for:
count in multiples of twos,	squares), circles and	count in multiples of twos,	parts of an object, shape or	Measure and begin to record:	
fives and tens.	triangles]	fives and tens.	quantity.	<ul> <li>lengths and heights</li> </ul>	<ul> <li>mass/weight [for</li> </ul>
				<ul> <li>mass/weight [for</li> </ul>	example,
Given a number, identify one	3-D shapes [for example,	Given a number, identify	Compare, describe and	example,	heavy/light, heavier
more and one less.	cuboids (including cubes),	one more and one less.	solve practical problems for	heavy/light, heavier	than, lighter than]
	pyramids and spheres].		time [for example, quicker,	than, lighter than]	<ul> <li>capacity and</li> </ul>
Identify and represent		Identify and represent	slower, earlier, later]		volume [for
numbers using objects and		numbers using objects and		Count to and across 100,	example,
pictorial representations		pictorial representations	Measure and begin to	forwards and backwards,	full/empty, more
including the number line,		including the number line,	record time (hours, minutes,	beginning with 0 or 1, or	than, less than,
and use the language of:		and use the language of:	seconds)	from any given number.	half, half full,
equal to, more than, less		equal to, more than, less			quarter]
than (fewer), most, least.		than (fewer), most, least.	Recognise and know the	Count, read and write	
			value of different	numbers to 100 in numerals;	I can measure and begin to
Read and write numbers		Read and write numbers	denominations of coins and	count in multiples of twos,	record the following:
from 1 to 20 in numerals and		from 1 to 20 in numerals	notes	fives and tens.	
words.		and words.			<ul> <li>mass/weight</li> </ul>
			Sequence events in	Given a number, identify one	<ul> <li>capacity and</li> </ul>
Read, write and interpret		Read, write and interpret	chronological order using	more and one less.	volume
mathematical statements		mathematical statements	language [for example,		
involving addition (+),		involving addition (+),	before and after, next, first,	Identify and represent	
subtraction (-) and equals (=)		subtraction (–) and equals	today, yesterday, tomorrow,	numbers using objects and	
signs.		(=) signs.	morning, afternoon and	pictorial representations	
			evening].	including the number line,	
				and use the language of:	

	Represent and use number		Represent and use number	Recognise and use language	equal to, more than, less	
	bonds and related		bonds and related	relating to dates, including	than (fewer), most, least.	
	subtraction facts within 20.		subtraction facts within 20.	days of the week, weeks,		
				months and years.	Read and write numbers	
	Add and subtract one-digit		Add and subtract one-digit		from 1 to 20 in numerals and	
	and two-digit numbers to 20.		and two-digit numbers to	Tell the time to the hour	words.	
	including zero.		20, including zero.	and half past the hour and		
			, 3	draw the hands on a clock	Read, write and interpret	
	Solve one-step problems that		Solve one-step problems	face to show these times.	mathematical statements	
	involve addition and		that involve addition and		involving addition (+).	
	subtraction, using concrete		subtraction, using concrete	Compare, describe and	subtraction (–) and equals (=)	
	objects and pictorial		objects and pictorial	solve practical problems for	signs.	
	representations, and missing		representations, and missing	lengths and heights [for	Ĭ	
	number problems such as 7 =		number problems such as 7	example, long/short,	Represent and use number	
	-9.		= -9.	longer/shorter, tall/short,	bonds and related	
				double/half]	subtraction facts within 20.	
			Solve one-step problems			
			involving multiplication and	Measure and begin to	Add and subtract one-digit	
			division, by calculating the	record lengths and heights	and two-digit numbers to 20.	
			answer using concrete		including zero.	
			objects, pictorial			
			representations and arrays		Solve one-step problems that	
			with the support of the		involve addition and	
			teacher.		subtraction using concrete	
					objects and pictorial	
					representations, and missing	
					number problems such as 7 =	
					-9.	
TIMES	Count in multiples of 10 in	Count in 2's up to 24, linking		Focus on counting in	Count in multiples of 10, 2	Count in multiples of 10, 2
	order up to 120.	with even numbers and		multiples of 5 up to 60,	and 5 in order with growing	and 5 in order fluently.
		supporting doubles.		linking with knowledge of	fluency.	
OBJECTIVE				counting in 10s.		
		Count in multiples of 10 in				
		order up to 120.		Continue to develop fluency		
				of counting in 2's and 10's.		

## Year 1 Maths Vocabulary

#### Words in red denote new vocabulary for the year group

NUMBER	PLACE VALUE	ADDITION AND SUBTRACTION
number, <mark>numeral</mark>	ones	addition
zero	tens	add, more, and
one, two, three twenty	digit	make, sum, total
teens numbers, eleven, twelve	the same number as, as many as	altogether
twenty	more, larger, bigger, greater	double
twenty-one, twenty-two one hundred	fewer, smaller, less	near double, half, halve
none	fewest, smallest, least	one more, two more ten more
how many?	most, biggest, largest, greatest	how many more to make?
count, count (up) to, count on (from,	one more, ten more	how many more is than?
to), count back (from, to)	one less, ten less	how much more is?
forwards, backwards	equal to	subtract
count in ones, twos, fives, tens	one more, ten more, one less, ten less	take away
equal to, equivalent to	compare	how many are left/left over?
is the same as, more, less	order	how many have gone?
most, least	size	one less, two less, ten less
many	first, second, third twentieth	how many fewer is than?
odd, even	last, last but one	how much less is?
multiple of	before, after, next	difference between
few	between	equals, is the same as
pattern	half-way between	number bonds/pairs
pair	above, below	missing number

MULTIPLICATION AND DIVISION	FRACTIONS	MEASURE
multiplication	fraction	measure
multiply	equal part	measurement
multiplied by	equal grouping	size
multiple	equal sharing	compare
division	parts of a whole	guess, estimate
dividing	half	enough, not enough
grouping	one of two equal parts	too much, too little
sharing	quarter	too many, too few
doubling	one of four equal parts	nearly, close to, about the same as
halving		roughly
array		just over, just under
number patterns		
LENGTH	WEIGHT	CAPACITY AND VOLUME
centimetre, metre	kilogram, half kilogram	litre, half litre
length, height, width, depth	weigh, weighs, balances	capacity
long, short, tall, high, low	heavy, light	volume
wide, narrow, thick, thin	heavier than, lighter than	full, empty
longer, shorter, taller, higher	heaviest, lightest	more than
longest, shortest, tallest, highest	scales	less than
far, near, close		half full
ruler		quarter full
metre stick		holds
		container

TIME	MONEY	PROPERTIES OF SHAPE
days of the week, Monday, Tuesday	money	shape, pattern
months (January, February), seasons,	coin	flat
spring, summer, autumn, winter	penny, pence, pound	curved, straight
day, week, weekend, month, year	price, cost	round
birthday, holiday	buy, sell	hollow, solid
morning, afternoon, evening, night	spend, spent	sort
bedtime, dinner time, playtime	рау	make, build, draw
today, yesterday, tomorrow	change	size
before, after, earlier, later	dear, costs more	bigger, larger, smaller
next, first, last, midnight, date	cheap, costs less, cheaper	symmetry, symmetrical, symmetrical
now, soon, early, late	costs the same as	pattern
quick, quicker, quickest, quickly	how much?	pattern, repeating pattern
slow, slower, slowest, slowly	how many?	match
old, older, oldest, new, newer, newest	total	
takes longer, takes less time		
how long ago? how long will it be to?		
how long will it take to? how often?		
always, never, often, sometimes		
usually, once, twice		
hour, o'clock, half past, quarter past,		
quarter to		
clock, clock face, watch, hands		
hour hand, minute hand		
hours, minutes		

2D SHAPE	3D SHAPE	POSITION AND DIRECTION
corner, side	face, edge, vertex, vertices	position
point, pointed	cube, cuboid	over, under, underneath, above, below
rectangle (including square)	pyramid	top, bottom, side
circle	sphere	on, in, outside, inside
triangle	cone	around, in front, behind
	cylinder	front, back
		beside, next to, opposite, apart,
		between
		middle, edge
		centre, corner
		direction, journey
		left, right, up, down
		forwards, backwards, sideways
		across, next to, close, near, far
		along, through
		to, from, towards, away from
		movement
		slide, roll, turn
		stretch, bend
		whole turn, half turn, quarter turn,
		three-quarter turn

STATISTICS	GENERAL	
count, sort, vote	pattern	
group, set	puzzle	
list, table	problem, problem solving	
	mental, mentally	
	what could we try next?	
	how did you work it out?	
	explain your thinking	
	recognise	
	describe	
	draw	
	compare	
	sort	

## Y2 MATHS Curriculum Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	Recognise, find, name and write fractions 1/3, 1/4, 2/4, and 3/4 of a length, shape, set of objects or quantity.	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); weight (g/kg), volume to the	Choose and use appropriate standard units to estimate and measure mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest
Recognise the place value of each digit in a two-digit number (tens, ones).	Find different combinations of coins that equal the same amounts of money.	Calculate mathematical statements for multiplication and division	Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2	nearest appropriate unit, using rulers, scales and measuring vessels.	appropriate unit, using scales, thermometers and measuring vessels.
Identify, represent and estimate numbers using different representations, including the number line.	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	tables and write them using the multiplication (×), division (÷) and equals (=) signs.	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/m)	Compare and order lengths, volume and record the results using >, < and =	Compare and order mass, volume/capacity and record the results using >, < and =
Compare and order numbers from 0 up to 100; use <, > and = signs.	Identify and describe the properties of 2-D shapes, including the number of sides	Show that multiplication of two numbers can be done in any order (commutative)	Compare and order lengths	combinations of mathematical objects in patterns and sequences.	simple pictograms, tally charts, block diagrams and simple tables.
Read and write numbers to at least 100 in numerals and in words.	and line symmetry in a vertical line	and division of one number by another cannot. Solve problems involving	<ul> <li>&gt;, &lt; and =</li> <li>Compare and sequence intervals of time.</li> </ul>	Use mathematical vocabulary to describe position, direction and movement, including	Ask and answer simple questions by counting the number of objects in each category and sorting the
Use place value and number facts to solve problems. Can solve problems with addition and subtraction:	properties of 3-D shapes, including the number of edges, vertices and faces.	multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including	Tell and write the time to five minutes, including quarter past/to the hour	movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-	categories by quantity. Ask and answer questions about totalling and comparing categorical data.
<ul> <li>using concrete objects and pictorial representations, including those</li> </ul>	surface of 3-D shapes of the example, a circle on a cylinder and a triangle on a pyramid].	problems in contexts.	clock face to show these times.	quarter turns (clockwise and anti-clockwise).	
involving numbers, quantities and measures • applying their	Compare and sort common 2-D and 3-D shapes and averyday objects		minutes in an hour and the number of hours in a day.		

i.			1	1		1	
		knowledge of					
		mental and written					
		methods					
		Recall and use addition and					
		subtraction facts to 20					
		fluently. and derive and use					
		related facts up to 100					
		· · · · · · · · · · · · · · · · · · ·					
		Add and subtract numbers					
		using concrete objects,					
		pictorial representations, and					
		mentally, including:					
		<ul> <li>a two-digit number</li> </ul>					
		and ones					
		<ul> <li>a two-digit number</li> </ul>					
		and tens					
		<ul> <li>two two-digit</li> </ul>					
		<ul> <li>adding three one- disit symples are</li> </ul>					
		digit numbers					
		Show that addition of two					
		numbers can be done in any					
		order (commutative) and					
		subtraction of one number					
		from another cannot					
		nom another cannot.					
		Recognise and use the inverse					
		relationship between addition					
		and subtraction and use this					
		to check calculations and solve					
		missing number problems.					
	TIMES	Consolidate counting in steps	Count in steps of 2 and 5	Recall multiples of 2 up to	Recall multiples of 5 up to	Count in multiples of 3 to	Count in multiples of 3 to
	TABLE	of 2, 5 and 10 in order from 0	from 0 up to 12x fluently.	12x2 in any order, including	12x5 in any order, including	12x3 in order from 0.	12x3 in order from 0 with
	TABLE	up to 12x.	Recall multiples of 10 up to	missing numbers and	missing numbers and	Recall multiples of 2 up to	growing fluency. Recall
	OBJECTIVE	•	12x10 in any order. including	related division facts.	related division facts. Recall	12x2 in any order. including	multiples of 5 up to 12x5 in
			missing numbers and related	Recall multiples of 10 up to	multiples of 2 up to 12x2 in	missing numbers and related	any order, including missing
			division facts with growing	12x10 fluently	any order including missing	division facts fluently	numbers
			fluency	intention intention.	numbers	Recall multiples of 5 up to	and related division facts
			nachcy.		and related division facts	12v5 in any order including	fluently
					with growing fluoncy	missing numbers	incentry.
					with growing nuclicy.	and related division facts	
						with growing fluency	
			1	1			

## Year 2 Maths Vocabulary

#### Words in red denote new vocabulary for the year group

NUMBER	PLACE VALUE	ESTIMATING
number	ones	guess
numeral	tens, hundreds	how many?
zero	digit	estimate
one, two, three twenty	one-, two- or three-digit number	nearly
teens numbers, eleven, twelve	place, place value	roughly
twenty	stands for, represents	close to
twenty-one, twenty-two one	exchange	about the same as
hundred, two hundred one thousand	the same number as, as many as	just over, just under
none	more, larger, bigger, greater	exact, exactly
how many?	fewer, smaller, less	too many, too few
count, count (up) to, count on (from,	fewest, smallest, least	enough, not enough
to), count back (from, to)	most, biggest, largest, greatest	
forwards	one more, ten more	
backwards	one less, ten less	
count in ones, twos, fives, tens, threes,	equal to	
fours and so on	compare	
equal to	order	
equivalent to	size	
is the same as	first, second, third twentieth	
more, less	twenty-first, twenty-second	
most, least	last, last but one	
tally	before, after	

many	next	
odd, even	between	
multiple of	halfway between	
sequence	above, below	
continue		
predict		
few		
pattern		
pair, rule		
> greater than		
< less than		

ADDITION AND SUBTRACTION	MULTIPLICATION AND DIVISION	FRACTIONS
addition	multiplication, multiply	fraction
add, more, and	multiplied by, multiple	equivalent fraction
make, sum, total, altogether	groups of	mixed number
double, near double	times	numerator, denominator
half, halve	once, twice, three times ten times	equal part
one more, two more ten more one	repeated addition	equal grouping
hundred more	division	equal sharing
how many more to make?	dividing, divide, divided by, divided into	parts of a whole
how many more is than?	grouping	half, two halves
how much more is?	sharing, share, share equally	one of two equal parts
subtract, take away	left, left over	quarter, two quarters, three quarters
how many are left/left over?	one each, two each, three each ten	one of four equal parts
how many have gone?	each	one third, two thirds
one less, two less, ten less one	group in pairs, threes tens	one of three equal parts
hundred less	equal groups of	
how many fewer is than?	doubling, halving	
how much less is?	array	
difference between	row, column	
equals	number patterns	
is the same as	multiplication table	
number bonds/pairs/facts	multiplication fact, division fact	
tens boundary		

MEASUREMENT	LENGTH	WEIGHT
measure, measurement	centimetre, metre	kilogram, half kilogram, gram
size	length, height, width, depth	weigh, weighs, balances
compare, measuring scale	long, short, tall, high, low	heavy, light
guess, estimate	wide, narrow, thick, thin	heavier than, lighter than
enough, not enough	longer, shorter, taller, higher	heaviest, lightest
too much, too little,	longest, shortest, tallest, highest	scales
too many, too few	far, further, furthest, near, close	
nearly, close to, about the same as	ruler	
roughly	metre stick, tape measure	
just over, just under		
CAPACITY AND VOLUME	TEMPERATURE	MONEY
litre, half litre, millilitre	temperature	money, coin
capacity	degree	penny, pence, pound
volume		price, cost
full		buy, bought, sell, sold
empty		spend, spent
more than		pay, change
less than		dear, costs more
half full		cheap, costs less, cheaper
quarter full		costs the same as
holds, contains		how much?, how many?
container		total

TIME	POSITION AND DIRECTION	STATISTICS
days of the week, Monday, Tuesday	position	count, tally, sort, vote
months of the year (January, February	over, under, underneath	graph, block graph, pictogram
)	above, below	represent
seasons: spring, summer, autumn,	top, bottom, side	group, set
winter	on, in	list, table
day, week, weekend, fortnight, month,	outside, inside	label, title
year	around	most popular, most common
birthday, holiday	in front, behind	least popular, least common
morning, afternoon, evening, night	front, back	
bedtime, dinnertime, playtime	beside, next to	
today, yesterday, tomorrow	opposite	
before, after	apart	
earlier, later	between	
next, first, last	middle, edge	
midnight	centre	
date	corner	
now, soon, early, late	direction	
quick, quicker, quickest, quickly	journey, <mark>route</mark>	
slow, slower, slowest, slowly	left, right	
old, older, oldest	up, down	
new, newer, newest	higher, lower	
takes longer, takes less time	forwards, backwards, sideways	
how long ago?	across	
how long will it be to?	next to, close, near, far	

how long will it take to?	along	
how often?	through	
always, never, often, sometimes	to, from, towards, away from	
usually	clockwise, anticlockwise	
once, twice	movement	
hour, o'clock, half past, quarter past,	slide	
quarter to	roll	
5, 10, 15 minutes past	turn	
clock, clock face, watch, hands	stretch, bend	
digital/analogue clock/watch, timer	whole turn, half turn, quarter turn,	
hour hand, minute hand	three-quarter turn	
hours, minutes, seconds	right angle	
	straight line	
PROPERTIES OF SHAPE	2D SHAPE	3D SHAPE
shape, pattern	corner, side	face, edge, vertex, vertices
flat	point, pointed	cube, cuboid
curved, straight	rectangle (including square),	pyramid
round	rectangular	sphere
hollow, solid	circle, <mark>circular</mark>	cone
sort	triangle, triangular	cylinder
make, build, draw	pentagon	
surface	hexagon	
size	octagon	
bigger, larger, smaller		

symmetry, symmetrical, symmetrical		
pattern		
line symmetry		
pattern, repeating pattern		
match		
	GENERAL	
pattern		
puzzle		
problem, problem solving		
mental, mentally		
what could we try next?		
how did you work it out?		
show how you		
explain your thinking		
explain your method		
describe the pattern		
describe the rule		
investigate		
recognise, describe, draw, compare		
sort		
mental calculation		
written calculation		

## YEAR 3 MATHS Curriculum Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Count from 0 in multiples of	I can recall and use	I can count up and down in	I can measure the perimeter	I can tell and write the time	I can interpret and present
4, 8, 50 and 100; find 10 or	multiplication and division	tenths; recognise that tenths	of simple 2-D shapes	from an analogue clock,	data using bar charts,
100 more or less than a given	facts for the 3, 4 and 8	arise from dividing an object		including using Roman	pictograms and tables
number	multiplication tables	into 10 equal parts and in	I can add and subtract	numerals from I to XII, and	
		dividing one-digit numbers	amounts of money to give	12-hour and 24-hour clocks	I can solve one-step and two-
Recognise the place value of	I can write and calculate	or quantities by 10	change, using both £ and p		step questions [for example,
each digit in a three-digit	mathematical statements for		in practical contexts	I can estimate and read time	'How many more?' and 'How
number (hundreds, tens,	multiplication and division	I can recognise, find and		with increasing accuracy to	many fewer?'] using
ones)	using the multiplication	write fractions of a discrete	I can draw 2-D shapes and	the nearest minute; record	information presented in
	tables that they know,	set of objects: unit fractions	make 3-D shapes using	and compare time in terms	scaled bar charts and
Compare and order numbers	including for two-digit	and non-unit fractions with	modelling materials;	of seconds, minutes and	pictograms and tables.
up to 1000	numbers times one-digit	small denominators	recognise 3-D shapes in	hours; use vocabulary such	
	numbers, using mental and		different orientations and	as o'clock, a.m./p.m.,	I can measure, compare, add
Identify, represent and	progressing to formal written	I can recognise and use	describe them	morning, afternoon, noon	and subtract: mass (kg/g);
estimate numbers using	methods	fractions as numbers: unit		and midnight	volume/capacity (l/ml)
different representations		fractions and non-unit			
	I can solve problems,	fractions with small		I know the number of	
Read and write numbers up	including missing number	denominators		seconds in a minute and the	
to 1000 in numerals and in	problems, involving			number of days in each	
words	multiplication and division,	I can recognise and show,		month, year and leap year	
	including positive integer	using diagrams, equivalent			
Solve number problems and	scaling problems and	fractions with small		I can compare durations of	
practical problems involving	correspondence problems in	denominators		events [for example to	
these ideas.	which n objects are			calculate the time taken by	
	connected to m objects.	I can add and subtract		particular events or tasks].	
I can add and subtract		fractions with the same			
numbers mentally, including:		denominator within one		I can recognise angles as a	
		whole [for example, 5/7 +		property of shape or a	
<ul> <li>a three-digit</li> </ul>		1/7 = 6/7]		description of a turn	
number and ones					
				I can identify right angles,	
				recognise that two right	
				angles make a half-turn,	

	<ul> <li>a three-digit</li> </ul>		I can compare and order		three make three quarters of	
	number and tens		unit fractions, and fractions		a turn and four a complete	
			with the same denominators		turn; identify whether angles	
	<ul> <li>a three-digit</li> </ul>				are greater than or less than	
	number and		I can solve problems that		a right angle	
	hundreds		involve all of the above.			
					I can identify horizontal and	
	I can add and subtract		I can measure, compare, add		vertical lines and pairs of	
	numbers with up to three		and subtract lengths		perpendicular and parallel	
	digits using formal written		(m/cm/mm)		lines	
	methods of columnar					
	addition and subtraction					
	I can estimate the answer to a					
	calculation and use inverse					
	operations to check answers					
	I can solve problems,					
	including missing number					
	problems, using number					
	facts, place value, and more					
	complex addition and					
	subtraction					
TIMES	Count in multiples of 3 to	Recall multiples of 3 up to	Recall multiples of 3 up to	Recall multiples of 4 up to	Recall multiples of 4 up to	Recall multiples of 8 up to
TABLE	12x3 in order from 0 fluently.	12x3 in any order, including	12x3 in any order, including	12x4 in any order, including	12x4 in any order, including	12x8 in any order, including
		missing numbers	missing numbers and	missing numbers and	missing numbers and related	missing numbers and related
OBJECTIVE			related division facts	related division facts with	division facts fluently.	division facts fluently.
		and related division facts with	fluently.	growing fluency.		
		growing fluency.			Recall multiples of 8 up to	
			Count in multiples of 4 to	Count in multiples of 8 to	12x8 in any order, including	
		Count in multiples of 4 to	12x4 in order from 0 with	12x8 in order from 0	missing numbers and related	
		12x4 in order from 0 with	nuentiy.	nuentiy.	fluoney	
		growing fluency.			nuency.	
			Count in multiples of 8 to			
		Introduce (relating to x4) and	growing fluency			
		begin to count in multiples of	Browing Intericy.			
		8 from 0 to 12x8.				

## Year 3 Maths Vocabulary

#### Words in red denote new vocabulary for the year group

NUMBER	PLACE VALUE	ESTIMATING
number	ones	guess
numeral	tens, hundreds	how many?
zero	digit	estimate
one, two, three twenty	one-, two- or three-digit number	nearly
teens numbers, eleven, twelve	place, place value	roughly
twenty	stands for, represents	close to
twenty-one, twenty-two one	exchange	approximate, approximately
hundred, two hundred one thousand	the same number as, as many as	about the same as
none	more, larger, bigger, greater	just over, just under
how many?	fewer, smaller, less	exact, exactly
count, count (up) to, count on (from,	fewest, smallest, least	too many, too few
to), count back (from, to)	most, biggest, largest, greatest	enough, not enough
forwards	one more, ten more, one hundred more	round, nearest, round to the nearest
backwards	one less, ten less, one hundred less	ten,
count in ones, twos, fives, tens, threes,	equal to	hundred
fours, eights, fifties and so on to	compare	round up, round down
hundreds	order	
equal to	size	
equivalent to	first, second, third twentieth	
is the same as	twenty-first, twenty-second	
more, less	last, last but one	
most, least	before, after	

tally	next	
many	between	
odd, even	halfway between	
multiple of, factor of	above, below	
sequence		
continue		
predict		
few		
pattern		
pair, rule		
relationship		
> greater than		
< less than		
Roman numerals		

ADDITION AND SUBTRACTION	MULTIPLICATION AND DIVISION	FRACTIONS
addition	multiplication	fraction
add, more, and	multiply, multiplied by	equivalent fraction
make, sum, total	multiple, factor	mixed number
altogether	groups of	numerator, denominator
double, near double	times	equal part, equal grouping
half, halve	product	equal sharing
one more, two more ten more one	once, twice, three times ten times	parts of a whole, half, two halves
hundred more	repeated addition	one of two equal parts
how many more to make?	division	quarter, two quarters, three quarters
how many more is than?	dividing, divide, divided by, divided into	one of four equal parts
how much more is?	left, left over, remainder	one third, two thirds
subtract, take away	grouping	one of three equal parts
how many are left/left over?	sharing, share, share equally	sixths, sevenths, eighths, tenths
how many have gone?	one each, two each, three each ten	
one less, two less, ten less one	each	
hundred less	group in pairs, threes tens	
how many fewer is than?	equal groups of	
how much less is?	doubling	
difference between	halving	
equals	array	
is the same as	row, column	
number bonds/pairs/facts	number patterns	
missing number	multiplication table	
tens boundary, hundreds boundary	multiplication fact, division fact	

MEASUREMENT	LENGTH	WEIGHT
measure	millimetre, centimetre, metre,	kilogram, half kilogram, gram
measurement	kilometre, mile	weigh, weighs, balances
size	length, height, width, depth	heavy, light
compare	long, short, tall	heavier than, lighter than
measuring scale, division	high, low	heaviest, lightest
guess, estimate	wide, narrow	scales
enough, not enough	thick, thin	
too much, too little	longer, shorter, taller, higher and so	
too many, too few	on	
nearly, close to, about the same as,	longest, shortest, tallest, highest and	
approximately	so on	
roughly	far, further, furthest, near, close	
just over, just under	distance apart between to from	
	perimeter	
	ruler	
	metre stick, tape measure	

CAPACITY AND VOLUME	TEMPERATURE	TIME
litre, half litre, millilitre	temperature	time
capacity	degree	days, Monday, Tuesday
volume	centigrade	months (January, February)
full	Celsius	seasons: spring, summer, autumn,
empty		winter
more than		day, week, weekend, fortnight, month,
less than		year, century, birthday, holiday
half full		morning, afternoon, evening, night
quarter full		bedtime, dinner time, playtime
holds, contains		today, yesterday, tomorrow
container		before, after, earlier, later
		next, first, last
		midnight, <mark>calendar</mark> , date
		now, soon, early, late, earliest, latest
		quick, quicker, quickest, quickly
		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?
		how often?
		always, never, often, sometimes,
		usually

		once, twice
		hour, o'clock, half past, quarter past,
		quarter to
		5, 10, 15 minutes past
		a.m., p.m.
		clock, clock face, watch, hands
		digital/analogue clock/watch, timer
		hour hand, minute hand
		hours, minutes, seconds
		Roman numerals
		12-hour clock time, 24-hour clock time
MONEY	PROPERTIES OF SHAPE	2D SHAPE
money, coin	shape, pattern	corner, side
penny, pence, pound	flat, curved, straight	point, pointed
price, cost, buy, bought, sell, sold	round, hollow, solid	rectangle (including square),
spend, spent, pay, change	sort, make, build, draw	rectangular
dear, costs more, cheap, costs less,	perimeter, surface, size	circle, circular
cheaper, costs the same as	bigger, larger, smaller	triangle, triangular
how much? how many?	symmetry, symmetrical, symmetrical	pentagon, <mark>pentagonal</mark>
total	pattern	hexagon, hexagonal
	line symmetry	octagon, octagonal
	pattern, repeating pattern	quadrilateral
	match	right-angled
	2-D shape	parallel, perpendicular

3D SHAPE	POSITION AND DIRECTION	STATISTICS
face, edge, vertex, vertices	position, over, under, underneath,	count, tally, sort, vote
cube, cuboid	above, below, top, bottom, side	graph, block graph, pictogram
pyramid	on, in, outside, inside, around, in front,	represent
sphere, hemisphere	behind, front, back	group, set
cone	beside, next to, opposite	list, table, chart, bar chart, frequency
cylinder	apart, between	table
prism, triangular prism	middle, edge, centre, corner	Carroll diagram, Venn diagram
	direction, journey, route	label, title, <mark>axis, axes</mark>
	left, right, up, down, higher, lower	diagram
	forwards, backwards, sideways	most popular, most common
	across, next to, close, near, far	least popular, least common
	along, through	
	to, from, towards, away from	
	clockwise, anticlockwise	
	compass point	
	north, south, east, west, N, S, E, W	
	horizontal, vertical, diagonal	
	movement	
	slide, roll, turn, stretch, bend	
	whole turn, half turn, quarter turn,	
	three-quarter turn	
	angle is a greater/smaller angle than	
	right angle, acute angle	
	obtuse angle, straight line	

GENERAL
pattern
puzzle
problem, problem-solving
mental, mentally
what could we try next?
how did you work it out?
show how you
explain your thinking, explain your method, describe the pattern, describe the rule
investigate
recognise
describe
draw
compare, sort
greatest value, least value
mental calculation, written calculation
statement

## YEAR 4 MATHS Curriculum Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Count in multiples of 6, 7, 9,	Recall multiplication and	Recognise and show, using	Measure and calculate the	Read, write and convert time	Interpret and present
25 and 1000.	division facts for	diagrams, families of	perimeter of a rectilinear	between analogue and	discrete and continuous data
	multiplication tables up to 12	common equivalent	figure (including squares) in	digital 12- and 24-hour	using appropriate graphical
Find 1000 more or less than a	× 12	fractions	centimetres and metres	clocks	methods, including bar
given number.					charts and time graphs.
	Use place value, known and	Count up and down in	Find the area of rectilinear	Solve problems involving	
Count backwards through	derived facts to multiply and	hundredths; recognise that	shapes by counting squares	converting from hours to	Solve comparison, sum and
zero to include negative	divide mentally, including:	hundredths arise when		minutes; minutes to	difference problems using
numbers.	multiplying by 0 and 1;	dividing an object by one	Estimate, compare and	seconds; years to months;	information presented in bar
	dividing by 1; multiplying	hundred and dividing tenths	calculate different	weeks to days.	charts, pictograms, tables
Recognise the place value of	together three numbers	by ten.	measures, including money		and other graphs.
each digit in a four-digit			in pounds and pence	Identify acute and obtuse	
number (thousands,	Recognise and use factor	Solve problems involving		angles and compare and	Describe positions on a 2-D
hundreds, tens, and ones).	pairs and commutativity in	increasingly harder fractions	Solve simple measure and	order angles up to two right	grid as coordinates in the
	mental calculations	to calculate quantities, and	money problems involving	angles by size	first quadrant
Order and compare numbers		fractions to divide	fractions and decimals to		
beyond 1000.	Multiply two-digit and three-	quantities, including non-	two decimal places.	Identify lines of symmetry in	Describe movements
	digit numbers by a one-digit	unit fractions where the		2-D shapes presented in	between positions as
Identify, represent and	number using formal written	answer is a whole number	Compare and classify	different orientations	translations of a given unit to
estimate numbers using	layout		geometric shapes, including		the left/right and up/down
different representations.		Add and subtract fractions	quadrilaterals and triangles,	Complete a simple	
	Solve problems involving	with the same denominator	based on their properties	symmetric figure with	Plot specified points and
Round any number to the	multiplying and adding,		and sizes	respect to a specific line of	draw sides to complete a
nearest 10, 100 or 1000.	including using the	Recognise and write decimal		symmetry.	given polygon.
	distributive law to multiply	equivalents of any number			
Solve number and practical	two digit numbers by one	of tenths or hundredths			Measure, compare, add and
problems that involve all of	digit, integer scaling				subtract: mass (kg/g);
the above and with	problems and harder	Recognise and write decimal			volume/capacity (I/mI)
increasingly large positive	correspondence problems	equivalents to 1/4, 1/2, 3/4			
numbers.	such as n objects are				
	connected to m objects.	Find the effect of dividing a			
		one- or two-digit number by			

	Read Roman numerals to 100		10 and 100, identifying the			
	(I to C) and know that over		value of the digits in the			
	time, the numeral system		answer as ones, tenths and			
	changed to include the		hundredths			
	concept of zero and place					
	value.		Bound decimals with one			
			decimal place to the nearest			
	Add and subtract numbers		whole number			
	with up to 4 digits using the					
	formal written methods of		Compare numbers with the			
	columnar addition and		same number of decimal			
	subtraction where		places up to two decimal			
	appropriate		places up to two decimal			
			places			
	Estimate and use inverse		Convert botween different			
	operations to check answers		Convert between different			
	to a calculation		units of measure [for			
			example, kilometre to			
			metre; nour to minutej			
	Solve addition and					
	subtraction two-step					
	problems in contexts,					
	deciding which operations					
	and methods to use and why.					
	Pecall multiples of 2.4 and 9	Pecall multiples of C in any	Decall multiples of 6 in any	Decell multiples of 7 in any	Pecall multiples of 0 in any	Peeell multiples of 0 in any
TIMES	Recall multiples of 3,4 and 8	order including missing	order including missing	order including missing	order including missing	order including missing
<u>TABLE</u>	including missing numbers	numbers and related division	numbers and related	numbers and related	numbers and related division	numbers and related division
<b>OBJECTIVE</b>	and related division facts	facts with growing fluency.	division facts fluently.	division facts fluently.	facts with growing fluency	facts fluently.
	fluently.				(using 10x and adjusting by 1	
		Fluently count in 7's in order	Recall multiples of 7 in any	Fluently count in 9's in order	group to find 9x)	Recall multiples of 12 in any
	Fluently count in 6's in order	up to 12x7.	order, including missing	up to 12x9.		order, including missing
	up to 12x6, using multiples of		numbers and related		Recall multiples of 11 in any	numbers and related division
	3 to support.		division facts with growing	Fluently count in 11's in	order, including missing	facts with growing fluency
			fluency.	order up to 12x11.	numbers and related division	(using 10x and adjusting by
						adding 2 more groups).
					Eluently count in 12's in	
					order up to 12x12.	
#### Year 4 Maths Vocabulary

#### Words in red denote new vocabulary for the year group

NUMBER	PLACE VALUE	ESTIMATING
number	ones	guess
numeral	tens, hundreds	how many
zero	digit	estimate
one, two, three twenty	one-, two- or three-digit number	nearly
teens numbers, eleven, twelve	place, place value	roughly
twenty	stands for, represents	close to
twenty-one, twenty-two one	exchange	approximate, approximately
hundred, two hundred one	the same number as, as many as	about the same as
thousand ten thousand, hundred	more, larger, bigger, greater	just over, just under
thousand, million	fewer, smaller, less	exact, exactly
none	fewest, smallest, least	too many, too few
how many?	most, biggest, largest, greatest	enough, not enough
count, count (up) to, count on (from,	one more, ten more, one hundred	round, nearest, round to the nearest
to),	more, one thousand more	ten,
count back (from, to)	one less, ten less, one hundred less,	hundred, thousand
forwards, backwards	one thousand less	round up, round down
count in ones, twos, fives, tens,	equal to	
threes, fours, eights, fifties, sixes,	compare	
sevens, nines, twenty-fives and so on	order	
to hundreds, thousands	size	
equal to, equivalent to	first, second, third twentieth	

is the same as	twenty-first, twenty-second	
more, less	last, last but on	
most, least	before, after	
tally	next	
many	between	
odd, even	halfway between	
multiple of, factor of	above, below	
sequence		
continue		
predict		
few		
pattern		
pair, rule		
relationship		
next, consecutive		
> greater than		
< less than		
Roman numerals		
integer, positive, negative		
above/below zero, minus		
negative numbers		

ADDITION AND SUBTRACTION	MULTIPLICATION AND DIVISION	FRACTIONS
addition	multiplication, multiply	fraction
add, more, and, make, sum, total	multiplied by	equivalent fraction
altogether	multiple, factor	mixed number
double, near double	groups of	numerator, denominator
half, halve	times, product	equal part
one more, two more ten more	once, twice, three times ten times	equal grouping
one hundred more	repeated addition	equal sharing
how many more to make?	division, dividing, divide, divided by,	parts of a whole
how many more is than?	divided into	half, two halves
how much more is?	left, left over, remainder	one of two equal parts
subtract, take away	grouping	quarter, two quarters, three quarters
how many are left/left over?	sharing, share, share equally	one of four equal parts
how many have gone?	one each, two each, three each ten	one third, two thirds
one less, two less, ten less one	each	one of three equal parts
hundred less	group in pairs, threes tens	sixths, sevenths, eighths, tenths
how many fewer is than?	equal groups of	hundredths
how much less is?	doubling, halving	decimal, decimal fraction, decimal
difference between	array, row, column	point, decimal place, decimal
equals, is the same as	number patterns	equivalent
number bonds/pairs/facts	multiplication table	proportion
missing number	multiplication fact, division fact	
tens boundary, hundreds boundary	inverse	
inverse	square, squared, cube, cubed	

MEASUREMENT	LENGTH	WEIGHT
measure	millimetre, centimetre, metre,	mass: big, bigger, small, smaller
measurement	kilometre, mile	weight: heavy/light, heavier/lighter,
size	length, height, width, depth, breadth	heaviest/lightest
compare	long, short, tall	kilogram, half kilogram, gram
unit, standard unit	high, low	weigh, weighs, balances
metric unit	wide, narrow	heavy, light
measuring scale, division	thick, thin	heavier than, lighter than
guess, estimate	longer, shorter, taller, higher and	heaviest, lightest
enough, not enough	so on	scales
too much, too little	longest, shortest, tallest, highest	
too many, too few	and so on	
nearly, close to, about the same as,	far, further, furthest, near, close	
approximately	distance apart between to	
roughly	from	
just over, just under	edge, perimeter	
	area, covers	
	square centimetre (cm <sup>2</sup> )	
	ruler	
	metre stick, tape measure	

CAPACITY AND VOLUME	TEMPERATURE	TIME
litre, half litre, millilitre	temperature	time
capacity	degree	days of the week, Monday, Tuesday
volume	centigrade	
full	Celsius	months of the year (January,
empty		February)
more than		seasons: spring, summer, autumn,
less than		winter
half full		day, week, weekend, fortnight,
quarter full		month, year, leap year, century,
holds, contains		millennium
container, measuring cylinder		birthday, holiday
		morning, afternoon, evening, night
		bedtime, dinner time, playtime
		today, yesterday, tomorrow
		before, after
		earlier, later
		next, first, last
		noon, midnight
		calendar, date, date of birth
		now, soon, early, late, earliest, latest
		quick, quicker, quickest, quickly
		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?
	how often?
	always, never, often, sometimes
	usually
	once, twice
	hour, o'clock, half past, quarter past,
	quarter to
	5, 10, 15 minutes past
	a.m., p.m.
	clock, clock face, watch, hands
	digital/analogue clock/watch, timer
	hour hand, minute hand
	hours, minutes, seconds
	timetable, arrive, depart
	Roman numerals
	12-hour clock time, 24-hour clock
	time

MONEY	PROPERTIES OF SHAPE	2D SHAPE
money	shape, pattern	2-D, two-dimensional
coin	flat, line	corner, side
penny, pence, pound	curved, straight	point, pointed
price, cost	round	rectangle (including square),
buy, bought, sell, sold	hollow, solid	rectangular, <mark>oblong</mark>
spend, spent	sort	rectilinear
рау	make, build, construct, draw, sketch	circle, circular
change	perimeter	triangle, triangular
dear, costs more	centre	equilateral triangle, isosceles
cheap, costs less, cheaper	surface	triangle, scalene triangle
costs the same as	angle, right-angled	pentagon, pentagonal
how much?	base, square-based	hexagon, hexagonal
how many?	size	heptagon
total	bigger, larger, smaller	octagon, octagonal
	symmetry, symmetrical, symmetrical	quadrilateral
	pattern	parallelogram, rhombus, trapezium
	line symmetry	polygon
	reflect, reflection	right-angled
	pattern, repeating pattern	parallel, perpendicular
	match	
	regular, irregular	

3D SHAPE	POSITION AND DIRECTION	
3-D, three-dimensional	position	
face, edge, vertex, vertices	over, under, underneath	
cube, cuboid	above, below	
pyramid	top, bottom, side	
sphere, hemisphere, spherical	on, in	
cone	outside, inside	
cylinder, <mark>cylindrical</mark>	around	
prism, triangular prism	in front, behind	
tetrahedron, polyhedron	front, back	
	beside, next to	
	opposite	
	apart	
	between	
	middle, edge	
	centre	
	corner	
	direction	
	journey, route	
	left, right	
	up, down	
	higher, lower	
	forwards, backwards, sideways	
	across	

next to, close, near, far
along
through
to, from, towards, away from
clockwise, anticlockwise
compass point
north, south, east, west, N, S, E, W
north-east, north-west, south-east,
south-west, NE, NW, SE, SW
horizontal, vertical, diagonal
translate, translation
movement
slide, roll, turn, stretch, bend
whole turn, half turn, quarter turn,
three-quarter turn
rotate, rotation
angle, is a greater/smaller angle than
degree
right angle, acute angle, obtuse angle
reflection
straight line
ruler, set square
angle measurer, compass

STATISTICS	GENERAL
count, tally, sort, vote	pattern
survey, questionnaire, data	puzzle
graph, block graph, pictogram	problem, problem solving
represent	mental, mentally
group, set	what could we try next?
list, table, chart, bar chart, frequency table	how did you work it out?
Carroll diagram, Venn diagram	show how you
label, title, axis, axes	explain your thinking
diagram	explain your method
most popular, most common	describe the pattern
least popular, least common	describe the rule
	investigate
	recognise
	describe
	draw
	compare
	sort
	greatest value, least value
	mental calculation, written calculation
	statement
	justify
	make a statement

# YEAR 5 MATHS Curriculum Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Read, write, order and	Identify multiples and factors,	Compare and order fractions	Measure and calculate the	Solve problems involving	Solve comparison, sum and
compare numbers to at least	including finding all factor	whose denominators are all	perimeter of composite	converting between units of	difference problems using
1,000,000 and determine the	pairs of a number, and	multiples of the same	rectilinear shapes in	time	information presented in a
value of each digit	common factors of two	number	centimetres and metres		line graph
	numbers.			Know angles are measured	
Count forwards or backwards		Identify, name and write	Calculate and compare the	in degrees: estimate and	Complete, read and interpret
in steps of powers of 10 for	Know and use the vocabulary	equivalent fractions of a	area of rectangles (including	compare acute, obtuse and	information in tables,
any given number up to	of prime numbers, prime	given fraction, represented	squares) including using	reflex angles	including timetables.
1,000,000	factors and composite (non-	visually, including tenths and	standard units, square		
	prime) numbers	hundredths	centimetres (cm2) and	Draw given angles, and	Estimate volume e.g. using
Interpret negative numbers			square metres (m2) and	measure them in degrees (o)	1cm3 blocks to build cuboids
in context, count forwards	Establish whether a number	Recognise mixed numbers	estimate the area of		(including cubes) and
and backwards with positive	up to 100 is prime and recall	and improper fractions and	irregular shapes	Identify:	capacity e.g. using water
and negative whole numbers,	prime numbers up to 19	convert from one form to		<ul> <li>angles at a point and 1</li> </ul>	
including through 0		the other and write	Use all four operations to	whole turn (total 360°)	Identify, describe and
	Multiply numbers up to 4	mathematical statements >	solve problems involving	• angles at a point on a	represent the position of a
Round any number up to	digits by a one- or two-digit	1 as a mixed number	measure using decimal	straight line and half a	shape following a reflection
1,000,000 to the nearest 10,	number using a formal	e.g. 2/5 + 4/5 = 6/5 = 1 and	notation including scaling.	turn (total 180°)	or translation, using the
100, 1,000, 10,000 and	written method, including	1/5	e.g. length, mass, volume,	• other multiples of 90°	appropriate language, and
100,000	long multiplication for two-		money		know that the shape has not
	digit numbers	Add and subtract fractions		Use the properties of	changed.
Solve number problems and		with the same denominator	Identify 3-D shapes,	rectangles to deduce related	
practical problems that	Multiply and divide numbers	and denominators that are	including cubes and other	facts and find missing	
involve all of the above	mentally drawing upon	multiples of the same	cuboids, from 2-D	lengths and angles	
	known facts	number	representations		
Read Roman numerals to				Distinguish between regular	
1,000 (M) and recognise	Divide numbers up to 4 digits	Multiply proper fractions		and irregular polygons based	
years written in Roman	by a one-digit number using	and mixed numbers by		on reasoning about equal	
, numerals.	the formal written method of	whole numbers, supported		sides and angles	
	short division and interpret	by materials and diagrams		sides and angles.	
Add and subtract whole					
numbers with more than 4					

digits, including using formal	remainders appropriately for	Read and write decimal		
written methods (columnar	the context	numbers as fractions		
addition and subtraction)		e.g. 0.71 = 71/100		
	Multiply and divide whole			
Add and subtract numbers	numbers and those involving	Recognise and use		
mentally with increasingly	decimals by 10, 100 and	thousandths and relate		
large numbers	1,000	them to tenths, hundredths		
		and decimal equivalents		
Use rounding to check	Recognise and use square			
answers to calculations and	numbers and cube numbers,	Round decimals with 2		
determine, in the context of a	and the notation for squared	decimal places to the		
problem, levels of accuracy	(2) and cubed (3)	nearest whole number and		
		to 1 decimal place		
Solve addition and	Solve problems involving			
subtraction multi-step	multiplication and division,	Read, write, order and		
problems in contexts,	including using their	compare numbers with up		
deciding which operations	knowledge of factors and	to 3 decimal places		
and methods to use and why.	multiples, squares and cubes			
		Solve problems involving		
	Solve problems involving	number up to 3 decimal		
	addition, subtraction,	places		
	multiplication and division			
	and a combination of these,	Recognise the per cent		
	including understanding the	symbol (%) and understand		
	meaning of the equals sign	that per cent relates to		
		"number of parts per 100",		
	Solve problems involving	and write percentages as a		
	multiplication and division,	fraction with denominator		
	including scaling by simple	100, and as a decimal		
	fractions and problems	fraction		
	involving simple rates.			
		Solve problems which		
		require knowing percentage		
		and decimal equivalents of		
		1/2, 1/4, 1/5, 2/5, 4/5 and		
		fractions with a		

			denominator of a multiple of			
			10 or 25.			
			Convert between different			
			units of metric measure			
			e.g. km and m, cm and m,			
			cm and mm, g and kg, I and			
			ml			
			Understand and use			
			approximate equivalences			
			between metric units and			
			common imperial units such			
			as inches, pounds and pints			
TIMES	Recap 9x / 7x / 11x / 12x	Related division facts for 3x /	Related division facts for 8x	Related division facts for 7x /	Two-step word problems	Two-step word problems
TABLE	tables.	4x / 6x / 8x including missing	/ 9x / 7x including missing	11x / 12x including missing	using times table facts	using times table facts
	All children to most ADE	numbers	numbers	numbers	(either multiplication or	(either multiplication,
ODJECHVE	requirements by half term			One/Two step word	aivision)	
	requirements by han term.		One step word problems	problems involving times		
			(either multiplication or	table facts (either		
			division)	multiplication or division)		

### Year 5 Maths Vocabulary

#### Words in red denote new vocabulary for the year group

NUMBER	PLACE VALUE	ESTIMATING
number	ones	guess
numeral	tens, hundreds	how many
zero	digit	estimate
one, two, three twenty	one-, two- or three-digit number	nearly
teens numbers, eleven, twelve	place, place value	roughly
twenty	stands for, represents	close to
twenty-one, twenty-two one	exchange	approximate, approximately
hundred, two hundred one	the same number as, as many as	about the same as
thousand ten thousand, hundred	more, larger, bigger, greater	just over, just under
thousand, million	fewer, smaller, less	exact, exactly
none	fewest, smallest, least	too many, too few
how many?	most, biggest, largest, greatest	enough, not enough
count, count (up) to, count on (from,	one more, ten more, one hundred	round, nearest, round to the nearest
to),	more, one thousand more	ten, hundred, thousand, ten
count back (from, to)	one less, ten less, one hundred less,	thousand
forwards, backwards	one thousand less	round up, round down
count in ones, twos, fives, tens,	equal to	
threes, fours, eights, fifties, sixes,	compare	
sevens, nines, twenty-fives and so on	order	
to hundreds, thousands	size	
equal to, equivalent to	first, second, third twentieth	

is the same as	twenty-first, twenty-second	
more, less	last, last but on	
most, least	before, after	
tally	next	
many	between	
odd, even	halfway between	
multiple of, factor of	above, below	
factor pair		
sequence		
continue		
predict		
few		
pattern		
pair, rule		
relationship		
next, consecutive		
> greater than		
< less than		
≥ greater than or equal to		
≤ less than or equal to		
Roman numerals		
integer, positive, negative		
above/below zero, minus		
negative numbers		

formula		
divisibility		
square number		
prime number		
ascending/descending order		
ADDITION AND SUBTRACTION	MULTIPLICATION AND DIVISION	FRACTIONS
addition	multiplication, multiply	Fraction, proper/improper fraction
add, more, and, make, sum, total	multiplied by	equivalent fraction
altogether	multiple, factor	mixed number
double, near double	groups of	numerator, denominator
half, halve	times, product	equivalent, reduced to, cancel
one more, two more ten more	once, twice, three times ten times	equal part
one hundred more	repeated addition	equal grouping
how many more to make?	division, dividing, divide, divided by,	equal sharing
how many more is than?	divided into	parts of a whole
how much more is?	left, left over, remainder	half, two halves
subtract, take away	grouping	one of two equal parts
how many are left/left over?	sharing, share, share equally	quarter, two quarters, three quarters
how many have gone?	one each, two each, three each ten	one of four equal parts
one less, two less, ten less one	each	one third, two thirds
hundred less	group in pairs, threes tens	one of three equal parts
how many fewer is than?	equal groups of	sixths, sevenths, eighths, tenths
how much less is?	doubling, halving	hundredths, thousandths
difference between	array, row, column	

equals, is the same as	number patterns	decimal, decimal fraction, decimal
number bonds/pairs/facts	multiplication table	point, decimal place, decimal
missing number	multiplication fact, division fact	equivalent
tens boundary, hundreds boundary,	inverse	proportion, in every, for every
ones boundary, tenths boundary	square, squared, cube, cubed	percentage, per cent, %
inverse		
MEASUREMENT	LENGTH	WEIGHT
measure	millimetre, centimetre, metre,	mass: big, bigger, small, smaller
measurement	kilometre, mile	weight: heavy/light, heavier/lighter,
size	length, height, width, depth, breadth	heaviest/lightest
compare	long, short, tall	kilogram, half kilogram, gram
unit, standard unit	high, low	weigh, weighs, balances
metric unit, imperial unit	wide, narrow	heavy, light
measuring scale, division	thick, thin	heavier than, lighter than
guess, estimate	longer, shorter, taller, higher and	heaviest, lightest
enough, not enough	so on	scales
too much, too little	longest, shortest, tallest, highest	
too many, too few	and so on	
nearly, close to, about the same as,	far, further, furthest, near, close	
approximately	distance apart between to	
roughly	from	
just over, just under	edge, perimeter	
	area, covers	

	square centimetre (cm <sup>2</sup> ), square	
	metre (m <sup>2</sup> ), square millimetre (mm <sup>2</sup> )	
	ruler	
	metre stick, tape measure	
CAPACITY AND VOLUME	TEMPERATURE	TIME
litre, half litre, millilitre	temperature	time
capacity	degree	days of the week, Monday, Tuesday
volume	centigrade	
full	Celsius	months of the year (January,
empty		February)
more than		seasons: spring, summer, autumn,
less than		winter
half full		day, week, weekend, fortnight,
quarter full		month, year, leap year, century,
holds, contains		millennium
container, measuring cylinder		birthday, holiday
pint, gallon		morning, afternoon, evening, night
		bedtime, dinner time, playtime
		today, yesterday, tomorrow
		before, after
		earlier, later
		next, first, last
		noon, midnight
		calendar, date, date of birth

	now, soon, early, late, earliest, latest
	quick, quicker, quickest, quickly
	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?
	how often?
	always, never, often, sometimes
	usually
	once, twice
	hour, o'clock, half past, quarter past,
	quarter to
	5, 10, 15 minutes past
	a.m., p.m.
	clock, clock face, watch, hands
	digital/analogue clock/watch, timer
	hour hand, minute hand
	hours, minutes, seconds
	timetable, arrive, depart
	Roman numerals

		12-hour clock time, 24-hour clock
		time
MONEY	PROPERTIES OF SHAPE	2D SHAPE
money	shape, pattern	2-D, two-dimensional
coin	flat, line	corner, side
penny, pence, pound	curved, straight	point, pointed
price, cost	round	rectangle (including square),
buy, bought, sell, sold	hollow, solid	rectangular, oblong
spend, spent	sort	rectilinear
рау	make, build, construct, draw, sketch	circle, circular
change	perimeter	triangle, triangular
dear, costs more	centre, radius, diameter	equilateral triangle, isosceles
cheap, costs less, cheaper	surface	triangle, scalene triangle
costs the same as	angle, right-angled	pentagon, pentagonal
how much?	congruent	hexagon, hexagonal
how many?	base, square-based	heptagon
total	size	octagon, octagonal
discount	bigger, larger, smaller	quadrilateral
currency	symmetry, symmetrical, symmetrical	parallelogram, rhombus, trapezium
	pattern	polygon
	line symmetry	right-angled
	reflect, reflection	parallel, perpendicular
	axis of symmetry, reflective	x-axis, y-axis, quadrant
	symmetry	

	pattern, repeating pattern	
	match	
	regular, irregular	
3D SHAPE	POSITION AND DIRECTION	
3-D, three-dimensional	position	
face, edge, vertex, vertices	over, under, underneath	
cube, cuboid	above, below	
pyramid	top, bottom, side	
sphere, hemisphere, spherical	on, in, outside, inside	
cone	around	
cylinder, cylindrical	in front, behind	
prism, triangular prism	front, back	
tetrahedron, polyhedron	beside, next to	
octahedron	opposite, apart, between	
	middle, edge	
	centre	
	corner	
	direction	
	journey, route	
	left, right, up, down	
	higher, lower	
	forwards, backwards, sideways	
	across	
	next to, close, near, far	

along	
through	
to, from, towards, away from	
clockwise, anticlockwise	
compass point	
north, south, east, west, N, S, E, W	
north-east, north-west, south-east,	
south-west, NE, NW, SE, SW	
horizontal, vertical, diagonal	
translate, translation	
coordinate	
movement	
slide, roll, turn, stretch, bend	
whole turn, half turn, quarter turn,	
three-quarter turn	
rotate, rotation	
angle, is a greater/smaller angle than	
degree	
right angle, acute angle. obtuse angle	
reflection	
straight line	
ruler, set square	
angle measurer, compass, protractor	

STATISTICS	GENERAL
count, tally, sort, vote	pattern
survey, questionnaire, data, database	puzzle
graph, block graph, pictogram	problem, problem solving
represent	mental, mentally
group, set	what could we try next?
list, table, chart, bar chart, frequency table, bar line chart	how did you work it out?
Carroll diagram, Venn diagram	show how you
line graph	explain your thinking
label, title, axis, axes	explain your method
diagram	describe the pattern
most popular, most common	describe the rule
least popular, least common	investigate
maximum/minimum value	recognise
outcome	describe
	draw
	compare
	sort
	greatest value, least value
	mental calculation, written calculation
	statement
	justify
	make a statement
	explain your reasoning

# Progression in MATHS

	EYFS	<u>YEAR 1</u>	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Number & Place Value	Understanding of numbers to 10	Ma1/2.1a count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	Ma2/2.1a count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward	Ma3/2.1a count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	Ma4/2.1a count in multiples of 6, 7, 9, 25 and 1,000	Ma5/2.1a read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	Ma6/2.1a read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
	Count numbers to 20	Ma1/2.1b count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s	<b>Ma2/2.1b</b> recognise the place value of each digit in a two-digit number (10s, 1s)	Ma3/2.1b recognise the place value of each digit in a 3-digit number (100s, 10s, 1s)	<b>Ma4/2.1b</b> find 1,000 more or less than a given number	Ma5/2.1b count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000	Ma6/2.1b round any whole number to a required degree of accuracy
	Given a number, identify 1 more and 1 less	Ma1/2.1c given a number, identify 1 more and 1 less	Ma2/2.1c identify, represent and estimate numbers using different representations, including the number line	Ma3/2.1c compare and order numbers up to 1,000	Ma4/2.1c count backwards through 0 to include negative numbers	Ma5/2.1c interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0	Ma6/2.1c use negative numbers in context, and calculate intervals across 0
	Subitise to 5 (recognising quantities without counting)	Ma1/2.1d identify and represent numbers using objects and pictorial representations including the number	Ma2/2.1d compare and order numbers from 0 up to 100; use <, > and = signs	Ma3/2.1d identify, represent and estimate numbers using different representations	Ma4/2.1d recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s and 1s)	Ma5/2.1d round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	Ma6/2.1d solve number and practical problems that involve all of the above.

	line, and use the language of: equal to, more than, less than (fewer), most, least					
Number recognition and formation to 10	Ma1/2.1e read and write numbers from 1 to 20 in numerals and words.	Ma2/2.1e read and write numbers to at least 100 in numerals and in words	Ma3/2.1e read and write numbers up to 1,000 in numerals and in words	Ma4/2.1e order and compare numbers beyond 1,000	Ma5/2.1e solve number problems and practical problems that involve all of the above	
		Ma2/2.1f use place value and number facts to solve problems.	Ma3/2.1f solve number problems and practical problems involving these ideas.	Ma4/2.1f identify, represent and estimate numbers using different representations	Ma5/2.1f read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.	
				Ma4/2.1g round any number to the nearest 10, 100 or 1,000		
				Ma4/2.1h solve number and practical problems that involve all of the above and with increasingly large positive numbers		
				Ma4/2.1i read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value.		

Addition &	Ma1/2.2a	Ma2/2.2a	Ma3/2.2a	Ma4/2.2a	Ma5/2.2a	In Y6, skills 2.2a to
Addition	read, write and	solve problems with	add and subtract	add and subtract	add and subtract	2.2c and 2.2e are
Subtraction	interpret	addition and subtraction:	numbers mentally,	numbers with up to	whole numbers	multiplication and
	mathematical		including:	4 digits using the	with more than 4	division skills so
(Addition.	statements involving	- using concrete	5	formal written	digits, including	have been placed
Subtraction.	addition (+).	objects and	<ul> <li>a three-</li> </ul>	methods of	using formal	below.
Multiplication and	subtraction (-) and	pictorial	digit	columnar addition	written methods	
Division in Year 6)	equals (=) signs	representations	number	and subtraction	(columnar addition	
		including those	and 1s	where appropriate	and subtraction)	
		involving	• a three-		,	
		numbers.	digit			
		quantities and	number			
		measures	and 10s			
			• a three-			
		- applying their	digit			
		increasing	number			
		knowledge of	and 100s			
		mental and				
		written				
		methods				
	Ma1/2.2h	Ma2/2 2h	Ma3/2.2b add and	Ma4/2.2h	Ma5/2.2h	
	represent and use	recall and use addition	subtract numbers	estimate and use	add and subtract	
	number bonds and	and subtraction facts to	with up to 3 digits	inverse operations	numbers mentally	
	related subtraction	20 fluently and derive	using formal written	to check answers to	with increasingly	
	facts within 20	and use related facts up	methods of	a calculation	large numbers	
		to 100	columnar addition			
		10 100	and subtraction			
	Ma1/2.2c	Ma2/2.2c	Ma3/2.2c	Ma4/2.2c	Ma5/2.2c	
	add and subtract	add and subtract	estimate the answer	solve addition and	use rounding to	
	one-digit and two-	numbers using concrete	to a calculation and	subtraction two-	check answers to	
	digit numbers to 20	objects, pictorial	use inverse	step problems in	calculations and	
	including 0	representations, and	operations to check	contexts, deciding	determine, in the	
		mentally including	answers	which operations	context of a	
				and methods to use	problem, levels of	
		- a two-digit		and why	accuracy	
		number and 1s				
		- a two-digit				
		number and 10s				

		<ul> <li>2 two-digit numbers</li> <li>adding 3 one- digit numbers</li> </ul>			
	Ma1/2.2d solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? - 9.	Ma2/2.2d show that addition of 2 numbers can be done in any order (commutative) and subtraction of one number from another cannot		Ma5/2.2d solve addition and subtraction multi- step problems in contexts, deciding which operations and methods to use and why.	Ma6/2.2d perform mental calculations, including with mixed operations and large numbers.
		Ma2/2.2e recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	Ma3/2.2e solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.		
					Ma6/2.2f use their knowledge of the order of operations to carry out calculations involving the 4 operations
					Ma6/2.2g solve addition and subtraction multi- step problems in contexts, deciding which operations

						and methods to
						use and why
						Ma6/2.2h
						solve problems
						involving addition,
						subtraction,
						multiplication and
						division
						Ma6/2.2i
						use estimation to
						check answers to
						calculations and
						determine, in the
						context of a
						problem, an
						appropriate degree
						of accuracy.
Multiplication	Ma1/2.3a	Ma2/2.3a	Ma3/2.3a	Ma4/2.3a	Ma5/2.3a	Ma6/2.2a
	solve one-step	recall and use	recall and use	recall multiplication	identify multiples	multiply multi-digit
& Division	problems involving	multiplication and	multiplication and	and division facts	and factors,	numbers up to 4
	multiplication and	division facts for the 2, 5	division facts for the	for multiplication	including finding all	digits by a two-digit
	division, by	and 10 multiplication	3, 4 and 8	tables up to 12 × 12	factor pairs of a	whole number
	calculating the	tables, including	multiplication tables		number, and	using the formal
	answer using	recognising odd and			common factors of	written method of
	concrete objects,	even numbers			two numbers.	long multiplication
	pictorial					
	representations and					
	arrays with the					
	support of the					
	teacher.					
		Ma2/2.3b	Ma3/2.3b	Ma4/2.3b	Ma5/2.3b	Ma6/2.2b
		calculate mathematical	write and calculate	use place value,	know and use the	divide numbers up
		statements for	mathematical	known and derived	vocabulary of	to 4 digits by a
		multiplication and	statements for	facts to multiply and	prime numbers,	two-digit whole
		division within the	multiplication and	divide mentally,	prime factors and	number using the
		multiplication tables and	division using the	including:	composite (non-	formal written
		write them using the	multiplication tables	multiplying by 0 and	prime) numbers	method of long
		multiplication (x).	that they know.	1: dividing by 1:		division, and

division (÷) and equals (=) signsincluding for two- digit numbers times one-digit numbers, using mental and progressing to formal written methodsmultiplying together 3 numbersinterpret remainders as whole number remainders as whole number remainders, or by rounding, as appropriate for the contextMa2/2.3c bwo that multiplication of 2 numbers can be division of 1 number yant division of 1 number by another cannotMa3/2.3c solve problems, including missing number problems, involving multiplication and division, includingMa3/2.3c solve problems, including missing number problems, involving multiplication and division of 1 number by another cannotMa3/2.3c solve problems, including missing number problems, involvingMa4/2.3c recognise and use factor pairs and commutativity in mental calculationsMa5/2.3c solve problems, is prime and recall prime numbers up to 4 digits by a two-digit number using the formal written method of short division
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Progressing to formal written methodsProgressing to formal written methodsfractions, or by rounding, as appropriate for the contextMa2/2.3c show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannotMa3/2.3c solve problems, including missing number problems, involvingMa4/2.3c recognise and use factor pairs and commutativity in mental calculationsMa5/2.3c establish whether a number up to 100 is prime and recall prime numbers up to 4 digits by a two-digit number using the formal written method of short division, including
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(commutative) and division of 1 number by another cannotinvolving multiplication and division, includingmental calculations to 19prime numbers up to 19using the formal written method of short division
division of 1 number by another cannot multiplication and division, including positive integer
another cannot division, including short division
i dostive integer i viere appropriate.
scaling problems interpreting
and correspondence
problems in which n according to the
objects are
connected to m
objects.
Ma2/2.3d Ma4/2.3d Ma5/2.3d
solve problems involving multiply two-digit multiply numbers
multiplication and and three-digit up to 4 digits by a
division, using materials.
arrays, repeated digit number using number using a
addition, mental formal written formal written
methods, and layout method, including
multiplication and
division facts, including
problems in contexts.
Ma4/2.3e Ma5/2.3e Ma6/2.2e
solve problems multiply and divide identify common
involving numbers mentally factors, common
multiplying and drawing upon multiples and
adding, including known facts nrime numbers
using the

		distributive law to multiply two digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.		
			Ma5/2.3f 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	
			Ma5/2.3g multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000	
			Ma5/2.3h recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)	

					Ma5/2.3i	
					solve problems	
					involving	
					multiplication and	
					division, including	
					using their	
					knowledge of	
					factors and	
					multiples, squares	
					and cubes	
					Ma5/2.3j	
					solve problems	
					involving addition,	
					subtraction,	
					multiplication and	
					division and a	
					combination of	
					these, including	
					understanding the	
					meaning of the	
					equals sign	
					Ma5/2.3k	
					solve problems	
					involving	
					multiplication and	
					division, including	
					scaling by simple	
					fractions and	
					problems involving	
		-	-	-	simple rates.	-
Fractions	Ma1/2.4a	Ma2/2.4a	Ma3/2.4a	Ma4/2.4a	Ma5/2.4a	Ma6/2.3a
	recognise, find and	recognise, find, name	count up and down	recognise and show,	compare and order	use common
	name a half as 1 of 2	and write fractions 1/3,	in tenths; recognise	using diagrams,	fractions whose	factors to simplify
	equal parts of an	1/4, 2/4 and 3/4 of a	that tenths arise	families of common	denominators are	fractions; use
	object, shape or	length, shape, set of	from dividing an	equivalent fractions	all multiples of the	common multiples
	quantity	objects or quantity	object into 10 equal		same number	to express fractions
			parts and in dividing			in the same
						denomination

			one-digit numbers			
			or quantities by 10			
	Ma1/2.4b	Ma2/2.4b	Ma3/2.4b	Ma4/2.4b	Ma5/2.4b	Ma6/2.3b
	recognise, find and	write simple fractions,	recognise, find and	count up and down	identify, name and	compare and order
	name a quarter as 1	for example $1/2$ of 6 = 3	write fractions of a	in hundredths;	write equivalent	fractions, including
	of 4 equal parts of an	and recognise the	discrete set of	recognise that	fractions of a given	fractions >1
	object, shape or	equivalence of 2/4 and	objects: unit	hundredths arise	fraction,	
	quantity.	1/2.	fractions and non-	when dividing an	represented	
			unit fractions with	object by a 100 and	visually, including	
			small denominators	dividing tenths by	tenths and	
				10.	hundredths	
			Ma3/2.4c	Ma4/2.4c	Ma5/2.4c	Ma6/2.3c
			recognise and use	solve problems	recognise mixed	add and subtract
			fractions as	involving	numbers and	fractions with
			numbers: unit	increasingly harder	improper fractions	different
			fractions and non-	fractions to	and convert from	denominators and
			unit fractions with	calculate quantities,	one form to the	mixed numbers,
			small denominators	and fractions to	other and write	using the concept
				divide quantities.	mathematical	of equivalent
				including non-unit	statements > 1 as a	fractions
				fractions where the	mixed number	
				answer is a whole	e.g. 2/5 + 4/5 = 6/5	
				number	= 1 and 1/5	
			Ma3/2.4d	Ma4/2.4d	Ma5/2.4d	Ma6/2.3d
			recognise and show.	add and subtract	add and subtract	multiply simple
			using diagrams.	fractions with the	fractions with the	pairs of proper
			equivalent fractions	same denominator	same denominator	fractions, writing
			with small		and denominators	the answer in its
			denominators		that are multiples	simplest form
					of the same	- p
					number	
			Ma3/2.4e	Ma4/2.4e	Ma5/2.4e	Ma6/2.3e
			add and subtract	recognise and write	multiply proper	divide proper
			fractions with the	decimal equivalents	fractions and	fractions by whole
			same denominator	of any number of	mixed numbers bv	numbers
			within one whole		whole numbers,	

			tenths or hundredths	supported by materials and diagrams	
		Ma3/2.4f compare and order unit fractions, and fractions with the same denominators	Ma4/2.4f recognise and write decimal equivalents to ¼; ½; ¾	Ma5/2.4f read and write decimal numbers as fractions e.g. 0.71 = 71/100	Ma6/2.3f associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.
		Ma3/2.4g solve problems that involve all of the above.	<b>Ma4/2.4g</b> 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	Ma5/2.4g recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Ma6/2.3g identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers are up to three decimal places
			Ma4/2.4h round decimals with 1 decimal place to the nearest whole number	Ma5/2.4h round decimals with 2 decimal places to the nearest whole number and to 1 decimal place	Ma6/2.3h multiply one-digit numbers with up to 2 decimal places by whole numbers
			Ma4/2.4i compare numbers with the same number of decimal places up to 2 decimal places	Ma5/2.4i read, write, order and compare numbers with up to 3 decimal places	Ma6/2.3i use written division methods in cases where the answer has up to 2 decimal places

		Ma4/2.4j solve simple measure and money problems involving fractions and decimals to 2 decimal places	Ma5/2.4j solve problems involving number up to 3 decimal places	Ma6/2.3j solve problems which require answers to be rounded to specified degrees of accuracy
			Ma5/2.4k recognise the per cent symbol (%) and understand that per cent relates to "number of parts per 100", and write percentages as a fraction with denominator 100, and as a decimal fraction	Ma6/2.3k recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
			Ma5/2.4I solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and fractions with a denominator of a multiple of 10 or 25.	

Proportion & Ratio				Ma6/2.4a solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
				Ma6/2.4b solve problems involving the calculation of percentages and the use of percentages for comparison
				Ma6/2.4c solve problems involving similar shapes where the scale factor is known or can be found
				Ma6/2.4d solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Algebra						Ma6/2.5a use simple
						formulae
						generate and
						describe linear
						number sequences
						Ma6/2.5c
						express missing
						number problems
						algebraically
						Ma6/2.5d
						find pairs of
						numbers that
						satisfy an equation
						with two
						unknowns
						Ma6/2.5e
						enumerate
						combinations of 2
						variables
Maaguramant	Ma1/3.1a	Ma2/3.1a	Ma3/3.1a	Ma4/3.1a	Ma5/3.1a	Ma6/3.1a
weasurement	compare, describe	choose and use	measure, compare.	convert between	convert between	solve problems
	and solve practical	appropriate standard	add and subtract:	different units of	different units of	involving the
	problems for:	units to estimate and	lengths	measure	metric measure	calculation and
		measure length/height in	(m/cm/mm); mass		e.g. km and m, cm	conversion of units
	<ul> <li>lengths and</li> </ul>	any direction (m/cm);	(kg/g);		and m, cm and	of measure, using
	heights	mass (kg/g);	volume/capacity		mm, g and kg, l and	decimal notation
	e.g. long /	temperature (°C);	(l/ml)		ml	up to 2 decimal
	short, longer	capacity (litres/ml) to the				places where
	/ shorter,	nearest appropriate unit,				appropriate
	tall / short,	using rulers, scales,				
	double / half	thermometers and				
	- mass /	measuring vessels		1		
	woight					
	weight					
	heavier than, lighter than - capacity and volume e.g. full, empty, more than, less than,					
--	--	--	--	---	--	--
	- time e.g. quicker, slower, earlier, later					
	Ma1/3.1b measure and begin to record the following: - lengths and heights - mass/weight - capacity and volume - time (hours, minutes, seconds)	Ma2/3.1b compare and order lengths, mass, volume/capacity and record the results using >, < and =	Ma3/3.1b measure the perimeter of simple 2-D shapes	Ma4/3.1b measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	Ma5/3.1b understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	Ma6/3.1b 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 3 decimal places
	Ma1/3.1c recognise and know the value of different denominations of coins and notes	Ma2/3.1c recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	Ma3/3.1c add and subtract amounts of money to give change, using both £ and p in practical contexts	Ma4/3.1c find the area of rectilinear shapes by counting squares	Ma5/3.1c measure and calculate the perimeter of composite rectilinear shapes	Ma6/3.1c convert between miles and kilometres

	Ma1/3.1d sequence events in chronological order using language e.g. before and after, next, first today, yesterday, tomorrow, morning, afternoon and evening	<b>Ma2/3.1d</b> find different combinations of coins that equal the same amounts of money	<b>Ma3/3.1d</b> tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12- hour and 24-hour clocks	<b>Ma4/3.1d</b> estimate, compare and calculate different measures, including money in pounds and pence	in centimetres and metres <b>Ma5/3.1d</b> calculate and compare the area of rectangles (including squares) including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes	<b>Ma6/3.1d</b> recognise that shapes with the same areas can have different perimeters and vice versa
	Ma1/3.1e recognise and use language relating to dates, including days of the week, weeks, months and years	<b>Ma2/3.1e</b> solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	Ma3/3.1e estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	<b>Ma4/3.1e</b> read, write and convert time between analogue and digital 12 and 24-hour clocks	Ma5/3.1e estimate volume e.g. using 1cm3 blocks to build cuboids (including cubes) and capacity e.g. using water	Ma6/3.1e recognise when it is possible to use formulae for area and volume of shapes
	Ma1/3.1f tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	Ma2/3.1f compare and sequence intervals of time	Ma3/3.1f know the number of seconds in a minute and the number of days in each month, year and leap year	Ma4/3.1f solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days.	Ma5/3.1f solve problems involving converting between units of time	Ma6/3.1f calculate the area of parallelograms and triangles

		Ma2/3.1g 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.	Ma3/3.1g compare durations of events e.g. calculate the time taken by particular events or tasks		Ma5/3.1g use all four operations to solve problems involving measure using decimal notation including scaling. e.g. length, mass, volume, money	Ma6/3.1g calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units e.g. mm3 and km3
		Ma2/3.1h know the number of minutes in an hour and the number of hours in a day				
Properties of Shapes	Ma1/3.2a recognise and name common 2-D and 3-D shapes, including: - rectangles (including squares), circles and triangles - cuboids (including cubes), pyramids and spheres	Ma2/3.2a identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line	Ma3/3.2a draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	Ma4/3.2a compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	Ma5/3.2a identify 3-D shapes, including cubes and other cuboids, from 2-D representations	Ma6/3.2a draw 2-D shapes using given dimensions and angles
		Ma2/3.2b identify and describe the properties of 3-D shapes,	Ma3/3.2b recognise angles as a property of shape	Ma4/3.2b identify acute and obtuse angles and	Ma5/3.2b know angles are measured in	Ma6/3.2b recognise, describe and build simple 3-

	including the number of edges, vertices and faces	or a description of a turn	compare and order angles up to 2 right	degrees: estimate and compare	D shapes, including making nets
			angles by size	acute, obtuse and reflex angles	
	Ma2/3.2c	Ma3/3.2c	Ma4/3.2c	Ma5/3.2c	Ma6/3.2c
	identify 2-D shapes on	identify right angles,	identify lines of	draw given angles,	compare and
	the surface of 3-D shapes	recognise that 2	symmetry in 2-D	and measure them	classify geometric
	e.g. a circle on a cylinder,	half-turn 3 make	different	in degrees (0)	their properties
		three quarters of a	orientations		and sizes and find
		turn and 4 a			unknown angles in
		complete turn;			any triangles,
		identify whether			quadrilaterals, and
		than or less than a			regular polygons
		right angle			
	Ma2/3.2d	Ma3/3.2d	Ma4/3.2d	Ma5/3.2d	Ma6/3.2d
	compare and sort	identify horizontal	complete a simple	identify:	illustrate and name
	common 2-D and 3-D	and vertical lines	symmetric figure	e anglas at a	parts of circles,
	objects.	perpendicular and	specific line of	• aligies at a	diameter and
	· · <b>,</b> · · · ·	parallel lines.	symmetry.	1 whole	circumference and
				turn (total	know that the
				360o)	diameter is twice
				<ul> <li>angles at a point on a</li> </ul>	the radius
				straight	
				line and	
				half a turn	
				(total	
				1800)	
				multiples	
				of 90o	
				Ma5/3.2e	Ma6/3.2e
				use the properties	recognise angles
				deduce related	at a point, are on a
1					

					•
				facts and find missing lengths and angles	straight line, or are vertically opposite, and find missing angles.
				Ma5/3.2f distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	
Position and Direction	Ma1/3.3a describe position, directions and movements, including whole, half, quarter and three- quarter turns.	Ma2/3.3a order and arrange combinations of mathematical objects in patterns and sequences	Ma4/3.3a describe positions on a 2-D grid as coordinates in the first quadrant	Ma5/3.3a identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	Ma6/3.3a describe positions on the full coordinate grid (all 4 quadrants)
		Ma2/3.3b use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti- clockwise).	Ma4/3.3b describe movements between positions as translations of a given unit to the left/right and up/down		Ma6/3.3b draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

				Ma4/3.3c plot specified points and draw sides to complete a given polygon.		
Statistics		Ma2/4.1a interpret and construct simple pictograms, tally charts, block diagrams and tables	Ma3/4.1a interpret and present data using bar charts, pictograms and tables	Ma4/4.1a interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	Ma5/4.1a solve comparison, sum and difference problems using information presented in a line graph	Ma6/4.1a interpret and construct pie charts and line graphs and use these to solve problems
		Ma2/4.1b ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity	Ma3/4.1b solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables. e.g. 'How many more?' and 'How many fewer?'	Ma4/4.1b solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	Ma5/4.1b complete, read and interpret information in tables, including timetables.	Ma6/4.1b calculate and interpret the mean as an average.
		Ma2/4.1c ask and answer questions about totalling and comparing categorical data.				