





'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

Rich connections across mathematical ideas to develop fluency are encouraged through variation of questions which can be seen in every lesson and evidenced in the maths books

Challenge is built into every lesson for pupils who grasp concepts rapidly through sophisticated problems and an opportunity for children to demonstrate their understanding creating their own problems.

Intervention is provided for children who are not sufficiently fluent with earlier material to consolidate their understanding.

Our mastery approach to the curriculum is designed to develop children's knowledge and understanding of mathematical concepts from the Early Years through to the end of Y6. In school, we follow the national curriculum and the following schemes of work as a guide to support teachers with their planning and assessment.

The calculation policy is used within school to ensure a consistent approach to teaching the four operations, building and developing methods year on year from EYFS to Year 6.

Learning has been carefully sequenced to support the development of new skills. Many skills are key pre-requisites of learning new ones, e.g. place value is learned prior to addition and subtraction, division leads onto fractions.

Our emphasis is on number skills first, carefully ordered, throughout our primary curriculum. The EYFS curriculum is based on the White Rose Maths scheme and are fully in line with the statutory framework for EYFS 2021.

In Years 1-6, learning is based on the National Curriculum 2014. Planning and resources are not based on any one scheme or source but will use materials from a variety of sources, such as White Rose, NCETM and Rising Stars. This enables teachers to choose resources and tasks based on children's needs and areas for development.

To ensure there are planned opportunities for children to revisit their learning, teachers allocate one day a week to re-cap and embed learning, irrespective of the week's learning objective. This allows for a greater depth of understanding and supports our commitment to ensure core skills are securely learned and fully embedded.

Our curriculum and planning has been adapted in response to the findings of the 2021 Ofsted Maths Review, incorporating:

- Emphasis on 'core skills' and regularly revisiting these;
- Regular 'low stakes' testing to embed knowledge and assess informally;
- Careful sequencing of units to ensure knowledge and skills are linked and build on those learned previously.

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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 undernumber bonds up to five and some nuitifierent contexts, recognising whenand how quantities can be distributed• Understanding ofNumbers to 5• Subitise to 5(recognisingquantities withoutcounting)• Number Recognitionand Formation• Early Addition (OneMore)• Comparing twoquantities• Early Subtraction(One Less)• Time (My day)	Autumn 2 rstanding of number to 10. They will lead umber bonds to 10, including double factories one quantity is greater than, less than of devenly. • 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)	Spring 1 ann about the composition of each num cts. The children will learn to count ver ir the same as the other quantity. The 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	Spring 2 nber. They will learn to subitise (recor- bally beyond 20, recognising the patt children will explore and represent par- Understanding of Numbers to 10 Understanding 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	Summer 1 gnise quantities without counting) to f ern of the counting system. They will atterns with numbers up to 10, includi 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	Summer 2 ive. They will automatically recall compare quantities up to 10 in ng 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
• Time (iviy day)	• Time (iviy day)	 Subtraction Knowledge of more and less and distribution of quantities evenly Spatial awareness 2D Shape 3D Shape 	 Subtraction Knowledge of more and less and distribution of quantities evenly Spatial awareness 2D Shape 3D Shape 	 Subtraction Knowledge of more and less and distribution of quantities evenly Making simple patterns and exploring more complex patterns Doubling Halving & sharing Odds and evens Length, height and distance Weight Capacity 	 Subtraction Knowledge of more and less and distribution of quantities evenly Making simple patterns and exploring more complex patterns Doubling Halving & sharing Odds and evens Length, height and distance Weight Capacity

EYFS Medium-Term Plan

Term	Week number	Theme
Autumn 1	Week 1	Getting To Know You
	Week 2	
	Week 3	
	Week 4	Just Like Me!
	Week 5	Match & Sort
	Week 6	Compare amounts
		Compare size, mass and capacity
		Making simple patterns
	Week 7	<u>It's Me 1 2 3!</u>
Autumn 2	Week 1	Representing 1,2 and 3
	Week 2	Comparing 1, 2 and 3
		Composition of 1, 2 and 3
		Circles and triangles
		Spatial Awareness
	Week 3	Light & Dark
	Week 4	Four and five
	Week 5	One more and one less
		Shapes with four sides
		Time: night and day
	Week 6	Consolidation
	Week 7	
Spring 1	Week 1	Alive in 5!
	Week 2	Introducing zero
	Week 3	Comparing numbers to 5
		Composition of 4 and 5
		Compare mass
		Compare capacity
	Week 4	Growing 6, 7, 8

	Week 5	6, 7 and 8			
	Week 6	Combining two groups			
		Length and height			
		Time			
	Week 7	Building 9 and 10			
Spring 2	Week 1	9 and 10			
	Week 2	Comparing numbers to 10			
		Bonds to 10			
		3D shape			
		Pattern			
	Week 3	Consolidation			
	Week 4				
	Week 5				
	Week 6	To 20 and Beyond			
Summer 1	Week 1	Building numbers beyond 10			
	Week 2	Counting patterns beyond 10			
		Spatial reasoning			
	Week 3	First then Now			
	Week 4	Adding more			
	Week 5	Jaking away			
		Spatial reasoning			
Summer 2	Week 1	Find my Pattern			
	Week 2	Doubling			
	Week 3	Sharing & Grouping			
		Even & Odd			
		Spatial reasoning			
	Week 4	On the Move			
	Week 5	Deepening understanding			
	Week 6	Patterns and relationships			
		Spatial Reasoning			
	Week 7	Consolidation			

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	

heaviest, lightest

scales

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

wide, narrow, thick, thin

shortest, tallest, highest

far, near, close

longer, shorter, taller, higher, longest,

enough, not enough

just over, just under

too much, too little, too many, too few

nearly, close to, about the same as

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

<u>YEAR 1</u>

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.	 lengths and heights 	 mass/weight [for
				 mass/weight [for 	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]	 capacity and
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.			 mass/weight
			Sequence events in	Given a number, identify one	 capacity and
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		
			-	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		
	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	
			teacher		involve addition and	
					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
TABLE	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.		

Y1 Medium-Term Plan

Term	Week number	Learning Objective
Autumn 1	Week 1	Place Value
	Week 2	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.
	Week 3	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens.
	Week 4	Given a number, identify one more and one less.
		Identify and represent numbers using objects and pictorial representations including the number line, and use the language
		of: equal to, more than, less than (fewer), most, least.
		Read and write numbers from 1 to 20 in numerals and words.
	Week 5	Addition and Subtraction
	Week 6	Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs.
	Week 7	Represent and use number bonds and related subtraction facts within 20.
Autumn 2	Week 1	Add and subtract one-digit and two-digit numbers to 20, including zero.
		Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and
		missing number problems such as 7 = -9.
	Week 2	Money
	Week 3	Recognise and know the value of different denominations of coins and notes
	Week 4	Shape
	Week 5	2-D shapes [for example, rectangles (including squares), circles and triangles]
		3-D shapes [for example, cuboids (including cubes), pyramids and spheres].
	Week 6	Consolidation Autumn Term Learning
	Week 7	
Spring 1	Week 1	Place Value
	Week 2	Addition and Subtraction
		Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.
		Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens.
		Given a number, identify one more and one less.
		Identify and represent numbers using objects and pictorial representations including the number line, and use the language
		of: equal to, more than, less than (fewer), most, least.
		Read and write numbers from 1 to 20 in numerals and words.
		Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs.

		Represent and use number bonds and related subtraction facts within 20.
		Add and subtract one-digit and two-digit numbers to 20, including zero.
		Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and
		missing number problems such as 7 = -9.
	Week 3	Multiplication and Division
	Week 4	Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial
	Week 5	representations and arrays with the support of the teacher.
	Week 6	
	Week 7	Consolidate previous learning
Spring 2	Week 1	Fractions
	Week 2	Recognise, find and name a half as one of two equal parts of an object, shape or quantity.
	Week 3	Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.
	Week 4	Time
	Week 5	Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later]
		Measure and begin to record time (hours, minutes, seconds)
		Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday,
		tomorrow, morning, afternoon and evening].
		Recognise and use language relating to dates, including days of the week, weeks, months and years.
		Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.
		Compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short,
		double/halfl
	Week 6	Measurement Height and Length
Summer 1	Week 1	Measure and begin to record lengths and heights
		Compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short,
		double/half]
		Measure and begin to record:
		lengths and heights
		mass/weight [for example, heavy/light, heavier than, lighter than]
	Week 2	Place Value
	Week 3	Addition and Subtraction
		Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.
		Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens.
		Given a number, identify one more and one less.

		Identify and represent numbers using objects and pictorial representations including the number line, and use the language
		of: equal to, more than, less than (fewer), most, least.
		Read and write numbers from 1 to 20 in numerals and words.
		Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs.
		Represent and use number bonds and related subtraction facts within 20.
		Add and subtract one-digit and two-digit numbers to 20, including zero.
		Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and
	missing number problems such as 7 = -9.	
	Week 4	Weight and Volume
	Week 5	Compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short,
		double/half]
		Measure and begin to record:
		lengths and heights
		 mass/weight [for example, heavy/light, heavier than, lighter than]
Summer 2	Week 1	Position and Direction
	Week 2	Describe position, direction and movement, including whole, half, quarter and three-quarter turns.
	Week 3	Measurement Mass, Capacity and temperature
	Week 4	Compare, describe and solve practical problems for:
		 mass/weight [for example, heavy/light, heavier than, lighter than]
		• capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
		I can measure and begin to record the following:
		mass/weight
		capacity and volume
	Week 5	Consolidation of Summer Term
	Week 6	
	Week 7	

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,	within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=)	Choose and use appropriate standard units to estimate and measure length/height	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.	including giving change. 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)	in any direction (m/cm) using rulers Compare and order lengths and record the results using	Order and arrange combinations of mathematical objects in patterns and sequences.	Interpret and construct 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 Identify and describe the	and division of one number by another cannot. Solve problems involving	>, < and = Compare and sequence intervals of time.	Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line	Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
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.	repeated addition, mental methods, and multiplication and division facts, including	Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a	and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-	Ask and answer questions about totalling and comparing categorical data.
 using concrete objects and pictorial representations, including those 	surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid].	problems in contexts.	clock face to show these times. Know the number of	quarter turns (clockwise and anti-clockwise).	
involving numbers, quantities and measures applying their increasing	Compare and sort common 2-D and 3-D shapes and everyday objects.		minutes in an hour and the number of hours in a day.		

	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: • a two-digit number and ones					
	 a two-digit number and tens two two-digit numbers adding three one- digit numbers Show that addition of two 					
	numbers can be done in any order (commutative) and subtraction of one number from another cannot.					
	relationship between addition and subtraction and use this to check calculations and solve missing number problems.					
<u>TIMES</u> <u>TABLE</u> <u>OBJECTIVE</u>	Consolidate counting in steps of 2, 5 and 10 in order from 0 up to 12x.	Count in steps of 2 and 5 from 0 up to 12x fluently. Recall multiples of 10 up to 12x10 in any order, including missing numbers and related division facts with growing fluency.	Recall multiples of 2 up to 12x2 in any order, including missing numbers and related division facts. Recall multiples of 10 up to 12x10 fluently.	Recall multiples of 5 up to 12x5 in any order, including missing numbers and related division facts. Recall multiples of 2 up to 12x2 in any order, including missing numbers and related division facts with growing fluency.	Count in multiples of 3 to 12x3 in order from 0. Recall multiples of 2 up to 12x2 in any order, including missing numbers and related division facts fluently. Recall multiples of 5 up to 12x5 in any order, including missing numbers and related division facts with growing fluency.	Count in multiples of 3 to 12x3 in order from 0 with growing fluency. Recall multiples of 5 up to 12x5 in any order, including missing numbers and related division facts fluently

Y2 Medium-Term Plan

Term	Week number	Learning Objective
Autumn 1	Week 1	Place Value
Week 2		Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.
	Week 3	Recognise the place value of each digit in a two-digit number (tens, ones).
Week 4		Identify, represent and estimate numbers using different representations, including the number line.
		Compare and order numbers from 0 up to 100; use <, > and = signs.
		Read and write numbers to at least 100 in numerals and in words.
		Use place value and number facts to solve problems.
	Week 5	Addition and Subtraction
	Week 6	Can solve problems with addition and subtraction:
	Week 7	 using concrete objects and pictorial representations, including those involving numbers, quantities and measures
Autumn 2	Week 1	 applying their increasing 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:
		a two-digit number and ones
		a two-digit number and tens
		two two-digit numbers
		adding three one-digit numbers
		Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another
		cannot.
		Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve
		missing number problems.
	Week 2	Money
	Week 3	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.
		Find different combinations of coins that equal the same amounts of money.
		Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving
		change.
	Week 4	Shape
	Week 5	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line
		Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.

		Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid].
		Compare and sort common 2-D and 3-D shapes and everyday objects.
	Week 6	Consolidation Autumn Term Learning
	Week 7	
Spring 1	Week 1	Place Value
	Week 2	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.
		Recognise the place value of each digit in a two-digit number (tens, ones).
		Identify, represent and estimate numbers using different representations, including the number line.
		Compare and order numbers from 0 up to 100; use <, > and = signs.
		Read and write numbers to at least 100 in numerals and in words.
		Use place value and number facts to solve problems.
		Addition and Subtraction
		Can solve problems with addition and subtraction:
		• using concrete objects and pictorial representations, including those involving numbers, quantities and measures
		applying their increasing knowledge of mental and written methods
		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:
		a two-digit number and ones
		a two-digit number and tens
		two two-digit numbers
		adding three one-digit numbers
		Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another
		cannot.
		Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve
		missing number problems.
	Week 3	Multiplication and Division
	Week 4	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, recognising odd and even numbers.
	Week 5	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the
	Week 6	multiplication (×), division (÷) and equals (=) signs.
		Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another
		cannot.
		Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and
		multiplication and division facts, including problems in contexts.
	Week 7	Consolidate previous learning

Spring 2	Week 1	Fractions	
	Week 2	Recognise, find, name and write fractions 1/3, 1/4, 2/4, and 3/4 of a length, shape, set of objects or quantity.	
	Week 3	Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2	
	Week 4	Time	
	Week 5	Compare and sequence intervals of time.	
		Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these	
		times.	
		Know the number of minutes in an hour and the number of hours in a day.	
	Week 6	Measurement Height and Length	
Summer 1	Week 1	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) using rulers	
		Compare and order lengths and record the results using >, < and =	
	Week 2	Weight and Volume	
	Week 3	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); weight (g/kg),	
		volume to the nearest appropriate unit, using rulers, scales and measuring vessels.	
		Compare and order weights and volume and record the results using >, < and =	
	Week 4	Position and Direction	
	Week 5	Order and arrange combinations of mathematical objects in patterns and sequences.	
		Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and	
		distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and	
		anti-clockwise).	
Summer 2	Week 1	Mass, Capacity and temperature	
	Week 2	Choose and use appropriate standard units to estimate and measure mass (kg/g); temperature (°C); capacity (litres/ml) to	
		the nearest appropriate unit, using scales, thermometers and measuring vessels.	
		Compare and order mass, volume/capacity and record the results using >, < and =	
	Week 3	<u>Statistics</u>	
	Week 4	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	
		Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.	
		Ask and answer questions about totalling and comparing categorical data.	
	Week 5	Consolidation of Summer Term	
	Week 6		
	Week 7		

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, circular	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 (I/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	
 a three-digit 		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,	

• a three-digit I can compare and order three make three quarters of number and tens unit fractions, and fractions a turn and four a complete • a three-digit with the same denominators turn; identify whether angles • a three-digit are greater than or less than	 a + brook
number and tens unit fractions, and fractions a turn and four a complete with the same denominators turn; identify whether angles a three-digit are greater than or less than	• a three-dig
• a three-digit with the same denominators turn; identify whether angles • a three-digit are greater than or less than	number ar
a three-digit are greater than or less than	
	 a three-dig
number and I can solve problems that a right angle	number ar
hundreds involve all of the above.	hundreds
I can identify horizontal and	
I can add and subtract I can measure, compare, add vertical lines and pairs of	I can add and subtra
numbers with up to three and subtract lengths perpendicular and parallel	numbers with up to
digits, using formal written (m/cm/mm) lines.	digits, using formal v
methods of columnar	methods of columna
addition and subtraction	addition and subtrac
L can estimate the answer to a	I can estimate the a
calculation and use inverse	calculation and use i
operations to check answers	operations to check
I can solve problems,	I can solve problems
including missing number	including missing nu
problems, using number	problems, using nun
facts, place value, and more	facts, place value, ar
complex addition and	complex addition an
subtraction	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	TIMES Count in multiples or
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	TABLE 12x3 in order from 0
missing numbers and missing numbers and missing numbers and related missing numbers an	
OBJECTIVE related division facts related division facts with division facts fluently.	BJECTIVE
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 fluently fluently fluently fluently fluently	
12x4 in order from 0 with filterity.	
growing nuericy.	
tates dues (relating to ut) and 12x8 in order from 0 with	
begin to count in multiples of growing fluency.	
8 from 0 to 12x8	
Year 3 Medium-Term Plan

Term	Week number	Learning Objective
Autumn 1	Week 1	Number & Place Value
		Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number
	Week 2	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
		Compare and order numbers up to 1000
	Week 3	Identify, represent and estimate numbers using different representations
		Read and write numbers up to 1000 in numerals and in words
	Week 4	Solve number problems and practical problems involving these ideas.
	Week 5	Addition & Subtraction
	Week 6	I can add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
		I can estimate the answer to a calculation and use inverse operations to check answers
	Week 7	I can solve problems, including missing number problems, using number facts, place value, and more complex addition and
		subtraction
Autumn 2	Week 1	Multiplication & Division
	Week 2	I can recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
	Week 3	I can write and calculate mathematical statements for multiplication and division using the multiplication tables that they
	Week 4	know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods
	Week 5	I can solve problems, including missing number problems, involving multiplication and division, including positive integer
		scaling problems and correspondence problems in which n objects are connected to m objects.
	Week 6	Consolidation and Depth
	Week 7	Place value & number, addition, subtraction, multiplication, division.
Spring 1	Week 1	Fractions & Decimals
		I can count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-
	Week 2	digit numbers or quantities by 10
		I can recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small
		denominators
	Week 3	I can recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
		I can recognise and snow, using diagrams, equivalent fractions with small denominators
		1 can add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7]
	Week 4	I can compare and order drift fractions, and fractions with the same denominators
1		

	Week 5	Measurement: Length
		I can measure, compare, add and subtract lengths (m/cm/mm)
	Week 6	Consolidation and Depth
	Week 7	Addition & Subtraction, Multiplication & Division, Fractions
Spring 2	Week 1	Measurement: Perimeter
		Measure the perimeter of simple 2-D shapes
	Week 2	Measurement: Money
		Add and subtract amounts of money to give change, using both £ and p in practical contexts
	Week 3	Properties Of Shape
	Week 4	Draw 2-D shapes and make 3-D shapes using modelling materials; recognise and describe 3-D shapes in different orientations
	Week 5	Consolidation and Depth
	Week 6	Fractions & Decimals
Summer 1	Week 1	Measurement: Time
	Week 2	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12 / 24-hour clocks
	Week 3	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, a.m./p.m., morning, afternoon, noon and midnight
		Know the number of seconds in a minute and the number of days in each month, year and leap year
		Compare durations of events [for example to calculate the time taken by particular events or tasks].
	Week 4	Properties Of Shape
	Week 5	Recognise angles as a property of shape or a description of a turn. Identify right angles, recognise that two right angles make
		a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less
		than a right angle. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
Summer 2	Week 1	<u>Statistics</u>
	Week 2	Interpret and present data using bar charts, pictograms and tables
		Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information
		presented in scaled bar charts and pictograms and tables.
	Week 3	Measurement: Mass & Capacity
	Week 4	Measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml)
	Week 5	Position & Direction
	Week 6	Describe positions on a 2-D grid as coordinates in the first quadrant
		Describe movements between positions as translations of a given unit to the left/right and up/down
		Plot specified points and draw sides to complete a given polygon.
	Week 7	Consolidation and Depth
		Four operations, fractions, decimals.

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, <mark>century</mark> , 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, calendar, 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

	<u>Autumn 1</u>	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		
	bevond 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
	Bound 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			
	Solvo 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 (l/ml)
	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.		Round 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			
	Estimate and use inverse		Convert between different			
	operations to check answers		units of measure [for			
	to a calculation		example, kilometre to			
			metre; hour to minute]			
	Solve addition and					
	subtraction two-step					
	problems in contexts,					
	deciding which operations					
	and methods to use and why.					
TIMES	Recall multiples of 3,4 and 8	Recall multiples of 6 in any	Recall multiples of 6 in any	Recall multiples of 7 in any	Recall multiples of 9 in any	Recall multiples of 9 in any
TABLE	up to 12x in any order,	order, including missing	order, including missing	order, including missing	order, including missing	order, including missing
	including missing numbers	numbers and related division	numbers and related	numbers and related	numbers and related division	numbers and related division
OBJECHVE	fluently	facts with growing fluency.	division facts fluently.	division facts fluently.	(using 10x and adjusting by 1	facts fluently.
	nachtly.	Eluoptly count in 7's in order	Pocall multiples of 7 in any	Eluently 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
					facts fluently.	adding 2 more groups).
					Eluently count in 12's in	
					order up to 12x12.	

Year 4 Medium-Term Plan

Term	Week number	Learning Objective
Autumn 1	Week 1	Number & Place Value
		Count in multiples of 6, 7, 9, 25 and 1000.
	Week 2	Find 1000 more or less than a given number.
		Count backwards through zero to include negative numbers.
	Week 3	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).
		Order and compare numbers beyond 1000.
	Week 4	Identify, represent and estimate numbers using different representations.
		Round any number to the nearest 10, 100 or 1000.
		Solve number and practical problems that involve all of the above and with increasingly large positive numbers.
		Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero
		and place value.
	Week 5	Addition & Subtraction
	Week 6	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where
		appropriate
	Week 7	Estimate and use inverse operations to check answers to a calculation
		Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
Autumn 2	Week 1	Multiplication & Division
	Week 2	Recall multiplication and division facts for multiplication tables up to 12 × 12
	Week 3	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1;
	Week 4	multiplying together three numbers
	Week 5	Recognise and use factor pairs and commutativity in mental calculations
		Multiply two-digit and three-digit numbers by a one-digit number using formal written layout
		Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one
		digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.
	Week 6	Consolidation and Depth
	N4/	Place value & number, addition, subtraction, multiplication, division.
	Week /	
Spring 1	Week 1	Fractions & Decimals
_		Recognise and show, using diagrams, families of common equivalent fractions

	Week 2	Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing
		tenths by ten.
		Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including
	Week 3	non-unit fractions where the answer is a whole number
		Add and subtract fractions with the same denominator
		Recognise and write decimal equivalents of any number of tenths or hundredths
	Week 4	Recognise and write decimal equivalents to 1/4, 1/2, 3/4
		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
		Round decimals with one decimal place to the nearest whole number
		Compare numbers with the same number of decimal places up to two decimal places
	Week 5	Measurement: Length
		Convert between different units of measure [for example, kilometre to metre]
		Solve simple measure problems involving fractions and decimals to two decimal places.
	Week 6	Consolidation and Depth
	Week 7	Addition & Subtraction, Multiplication & Division, Fractions
Spring 2	Week 1	Measurement: Perimeter & Area
		Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
		Find the area of rectilinear shapes by counting squares
	Week 2	Measurement: Money
		Estimate, compare and calculate different measures, including money in pounds and pence
		Solve simple money problems involving fractions and decimals to two decimal places.
	Week 3	Properties Of Shape
	Maak 4	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
	Week 4	Consolidation and Douth
	Week 5	Consolidation and Depth
	Week 6	Fractions & Decimals
Summer 1	Week 1	Measurement: Time
	Week 2	Read, write and convert time between analogue and digital 12- and 24-hour clocks
	Week 3	Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.
	Week 4	Properties Of Shape
	Week 5	Identify acute and obtuse angles and compare and order angles up to two right angles by size
		Identify lines of symmetry in 2-D shapes presented in different orientations
		Complete a simple symmetric figure with respect to a specific line of symmetry.
Summer 2	Week 1	Statistics

W	/eek 2	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.
W	/eek 3	Measurement: Mass & Capacity
W	/eek 4	Measure, compare, add and subtract: mass (kg/g); volume/capacity (I/mI)
W	/eek 5	Position & Direction
W	/eek 6	Describe positions on a 2-D grid as coordinates in the first quadrant
		Describe movements between positions as translations of a given unit to the left/right and up/down
		Plot specified points and draw sides to complete a given polygon.
W	/eek 7	Consolidation and Depth
		Four operations, fractions, decimals.

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 ²)	
	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, oblong
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		 angles at a point and 1 	
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			
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			
	digits, including using formal written methods (columnar addition and subtraction) Add and subtract numbers mentally with increasingly large numbers Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	digits, including using formal written methods (columnar addition and subtraction)remainders appropriately for the contextAdd and subtract numbers mentally with increasingly large numbersMultiply and divide whole numbers and those involving decimals by 10, 100 and 1,000Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracyRecognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.Solve problems involving multiplication and division, including using their knowledge of factors and multiplication and division and a combination of these, including understanding the meaning of the equals signSolve problems involving multiplication and division and a combination of these, including understanding the meaning of the equals sign	digits, including using formal written methods (columnar addition and subtraction)remainders appropriately for the contextRead and write decimal numbers as fractions e.g. 0.71 = 71/100Add and subtract numbers mentally with increasingly large numbersMultiply and divide whole numbers and those involving decimals by 10, 100 and 1,000Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalentsUse rounding to check answers to calculations and determine, in the context of a problem, levels of accuracyRecognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)Round decimals with 2 decimal placeSolve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.Solve problems involving multiplication and division, including using their knowledge of factors and multiplication and division and a combination of these, including understanding the meaning of the equals signRead, write, order and compare numbers with up to 3 decimal placesSolve problems involving addition, subtraction, multiplication and division, including understanding the meaning of the equals signRecognise 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 fractionSolve problems involving and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and fractions with a	digits, including using formal written methods (columnar addition and subtraction)remainders appropriately for the contextRead and write decimal numbers as fractions e.g. 0.71 = 71/100Add and subtract numbers mentally with increasingly large numbersMultiply and divide whole numbers and those involving decimals by 10, 100 and 1,000Recognise and use thousandths and relate thousandths and relate thousandths and relate thousandths and relate thousandths and relate thousandths and relate thousandths and relate (2) and cubed (3)Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)Read, write, order and compare numbers with 2 decimal placeSolve addition, subtraction, multiplication and division, including understanding the meaning of the equals sign multiplication and division and a combination of these, including understanding the meaning of the equals signRead, write, order and compare numbers with up to 3 decimal placesSolve problems involving multiplication and division, including understanding the meaning of the equals sign involving simple rates.Recognise the per cent symbol (%) and understand that per cent relates to "inumber of parts per 100", and write percentages as a fractionSolve problems involving multiplication and division, including scaling by simple fractions and problems 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	digits, including using formal written methods (columnar addition and subtraction) remainders appropriately for the context Read and write decimal numbers as fractions e.g. 0.71 = 71/100 Add and subtract numbers mentally with increasingly large numbers Multiply and divide whole decimals by 10, 100 and 1,000 Recognise and use square numbers and clube numbers, and the notation for squared (2) and cubed (3) Recognise and use thousandths and relate them to tenths, hundredths and decimal places to the nearest whole number and to 1 decimal places Solve addition and subtraction multi-step and methods to use and why. Solve problems involving multiplication and division, including understanding their knowledge of factors and multiples, squares and cubes, including understanding the maning of the equals sign multiplication and division, and a combination of these, including understanding the maning of the equals sign multiplication and division, including scaling by simple fractions with a Read and write decimal housed explicits Solve problems involving multiplication and division and a combination of these, including understanding the reactions with a Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per 100", and write percentages as a "multiplication and division, including scaling by simple 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 nounds and nints			
	Bacan 0x / 7x / 11x / 12x	Delated division facts for 2x /	Bolated division facts for 8y	Delated division facts for 74 /	Two stop word problems	Two stan word problems
TIMES	Recap 9x / 7x / 11x / 12x	Ax / 6x / 8x including missing	/ 9x / 7x including missing	11x / 12x including missing	using times table facts	using times table facts
TABLE	tables.	numbers	numbers	numbers	(either multiplication or	(either multiplication
OBJECTIVE	All children to meet ARF	humbers	numbers	numbers	division)	division or both)
	requirements by half term.		One step word problems	One/Two step word		
			involving times table facts	problems involving times		
			(either multiplication or	table facts (either		
			division)	multiplication or division)		

Year 5 Medium-Term Plan

Term	Week number	Learning Objective
Autumn 1	Week 1	Number & Place Value
		Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit
	Week 2	Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000
		Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including
	Week 3	through 0
		Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000
	Week 4	Solve number problems and practical problems that involve all of the above
		Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.
	Week 5	Addition & Subtraction
	Week 6	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
	Maak 7	Add and subtract numbers mentally with increasingly large numbers
	VVeek /	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
		Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
Autumn 2	Week 1	Multiplication & Division
	Week 2	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.
	Week 3	Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers
	Week 4	Establish whether a number up to 100 is prime and recall prime numbers up to 19
	Week 5	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication
		for two-digit numbers
		Multiply and divide numbers mentally drawing upon known facts
		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
		Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000
		Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)
		Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and
		cubes
		Solve problems involving addition, subtraction, multiplication and division and a combination of these, including
		understanding the meaning of the equals sign
		Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple
		rates.

Week 6 Consolidation and Depth				
	Week 7	Place value & number, addition, subtraction, multiplication, division.		
Spring 1	Week 1	Fractions, Decimals & Percentages Compare and order fractions whose denominators are all multiples of the same number Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths		
	Week 2	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number e.g. $2/5 \pm 4/5 = 6/5 = 1$ and $1/5$		
	Week 3	Add and subtract fractions with the same denominator and denominators that are multiples of the same number Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Read and write decimal numbers as fractions		
	Week 4	e.g. 0.71 = 71/100 Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place Read, write, order and compare numbers with up to 3 decimal places Solve problems involving number up to 3 decimal places 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 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.		
	Week 5	Measurement: Conversion & Equivalence Convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, I and mI Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints		
	Week 6	Consolidation and Depth		
	Week 7	Multiplication & Division, Fractions		
Spring 2	Week 1	Measurement: Perimeter & Area Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares) including using standard units, square centimetres (cm ²) and square metres (m ²) and estimate the area of irregular shapes		

	Week 2	Measurement: Measure with decimals
		Use all four operations to solve problems involving measure using decimal notation including scaling.
		e.g. length, mass, volume, money
	Week 3	Properties Of Shape
	Week 4	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations
	Week 5	Consolidation and Depth
	Week 6	Fractions & Decimals
Summer 1	Week 1	Measurement: Time
	Week 2	Solve problems involving converting between units of time
	Week 3	Properties Of Shape
	Week 4	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
	Week 5	Draw given angles, and measure them in degrees (o)
		Identify:
		 angles at a point and 1 whole turn (total 360°)
		 angles at a point on a straight line and half a turn (total 180°)
		 other multiples of 90°
		Use the properties of rectangles to deduce related facts and find missing lengths and angles
		Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.
Summer 2	Week 1	<u>Statistics</u>
	Week 2	Solve comparison, sum and difference problems using information presented in a line graph
		Complete, read and interpret information in tables, including timetables.
	Week 3	Measurement: Mass & Capacity
	Week 4	Estimate volume e.g. using 1cm3 blocks to build cuboids (including cubes) and capacity e.g. using water
	Week 5	Position & Direction
	Week 6	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.
	Week 7	Consolidation and Depth
		Four operations, fractions, decimals.

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 ²), square	
	metre (m ²), square millimetre (mm ²)	
	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

YEAR 6 MATHS Curriculum Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.	Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.	Recognise that shapes with the same areas can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and	Draw 2-D shapes using given dimensions and angles. Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify	
Round any whole number to a required degree of accuracy.	Compare and order fractions, including fractions >1.	Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers	volume of shapes. Calculate the area of parallelograms and triangles. Calculate, estimate and	geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals,	
Use negative numbers in context, and calculate intervals across 0.	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent	by 10, 100 and 1,000 giving answers are up to three decimal places.	and cuboids using standard units, including cubic centimetres (cm ³) and cubic metres (m ³), and extending	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter	
Solve number and practical problems that involve all of the above.	fractions. Multiply simple pairs of proper fractions, writing the	Multiply one-digit numbers with up to 2 decimal places by whole numbers.	to other units e.g. mm ³ and km ³ Solve problems involving the relative sizes of two	is twice the radius. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing	
Perform mental calculations, including with mixed operations and large numbers.	answer in its simplest form. Divide proper fractions by whole numbers.	Use written division methods in cases where the answer has up to 2 decimal places.	quantities where missing values can be found by using integer multiplication and division facts. Solve problems involving	angles.	
Use their knowledge of the order of operations to carry out calculations involving the 4 operations.	Describe positions on the full coordinate grid (all 4 quadrants).	Solve problems which require answers to be rounded to specified degrees of accuracy.	similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of		
Solve addition and subtraction multi-step problems in contexts,	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	fractions and multiples. Interpret and construct pie charts and line graphs and use these to solve problems. Calculate and interpret the mean as an average.		

deciding which operations			
and methods to use and why.	Solve problems involving the		
	calculation of percentages		
Solve problems involving	and the use of percentages		
addition, subtraction,	for comparison.		
multiplication and division.			
	Use simple formulae.		
Use estimation to check			
answers to calculations and	Generate and describe linear		
determine, in the context of a	number sequences.		
problem, an appropriate			
degree of accuracy.	Express missing number		
	problems algebraically		
Multiply multi-digit numbers	problems algebraicary.		
up to 4 digits by a two-digit	Find pairs of numbers that		
whole number using the	satisfy an equation with two		
formal written method of	unknowns		
long multiplication.	unknowns.		
Divide numbers un to 4 digits	Enumerate possibilities of		
by a two-digit whole number	combinations of 2 variables.		
using the formal written			
method of long division and	Solve problems involving the		
interpret remainders as	calculation and conversion		
whole number remainders	of units of measure, using		
fractions or by rounding as	decimal notation up to 2		
appropriate for the context	decimal places where		
appropriate for the context.	appropriate.		
Divido numbors un to 4 digits			
by a two-digit number using	Use, read, write and convert		
the formal written method of	between standard units,		
chort division where	converting measurements of		
annronriate interpreting	length, mass, volume and		
remainders according to the	time from a smaller unit of		
context	measure to a larger unit,		
	and vice versa, using		
	1	1	1

	Identify common factors,		decimal notation to up to 3			
	common multiples and prime		decimal places.			
	numbers					
			Convert between miles and			
			kilometres.			
TIMES	Year 6 children should now be	secure in all times tables and child	dren who did not meet end of Ye	ear 4 expectations should now h	ave been accelerated to be secu	re.
<u>TABLE</u> OBJECTIVE	Lesson starters will use mixed r	nultiplication/division facts.				

Year 6 Medium-Term Plan

Term	Week number	Learning Objective
Autumn 1	Week 1	Problem Solving and reasoning
	Week 2	Number & Place Value
	WEEK 2	Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.
	March 2	Round any whole number to a required degree of accuracy.
	Week 3	Use negative numbers in context, and calculate intervals across 0.
		Solve number and practical problems that involve all of the above.
	Week 4	Four Operations
		Perform mental calculations, including with mixed operations and large numbers.
	Week 5	Use their knowledge of the order of operations to carry out calculations involving the 4 operations.
	Weeks	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
		Solve problems involving addition, subtraction, multiplication and division.
		Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
		Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.
	Week 6	Assessments – SATs Practice/Revision
	Week 7	Four Operations
		Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as
		whole number remainders, fractions, or by rounding, as appropriate for the context.
		Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting
		remainders according to the context.
		Identify common factors, common multiples and prime numbers.
Autumn 2	Week 1	Fractions
	Week 2	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
	Week 3	Compare and order fractions, including fractions >1.
	Week 4	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
		Multiply simple pairs of proper fractions, writing the answer in its simplest form.
		Divide proper fractions by whole numbers.
	Week 5	Geometry: Position & Direction
		Describe positions on the full coordinate grid (all 4 quadrants).
	Week 6	Assessments – SATs Practice/Revision
	Week 7	Geometry: Position & Direction

		Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
Spring 1	Week 1	Decimals Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction. 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
	Week 2	answers are up to three decimal places. Multiply one-digit numbers with up to 2 decimal places by whole numbers. Use written division methods in cases where the answer has up to 2 decimal places. Solve problems which require answers to be rounded to specified degrees of accuracy.
	Week 3	PercentagesRecall and use equivalences between simple fractions, decimals and percentages, including in different contexts.Solve problems involving the calculation of percentages and the use of percentages for comparison.
	Week 4	AlgebraUse simple formulae.Generate and describe linear number sequences.Express missing number problems algebraically.Find pairs of numbers that satisfy an equation with two unknowns.Enumerate possibilities of combinations of 2 variables.
	Week 5	Measurement: Conversions Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where
	Week 6	appropriate. 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. Convert between miles and kilometres.
	Week 7	Assessments – SATs Practice/Revision
Spring 2	Week 1	Perimeter, Area & Volume
	Week 2	Recognise that shapes with the same areas can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume of shapes. Calculate the area of parallelograms and triangles. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm ³) and cubic metres (m ³), and extending to other units e.g. mm ³ and km ³
	Week 3	Proportion and Ratio

	Week 4	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. Solve problems involving similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.
	Week 5	Statistics Interpret and construct pie charts and line graphs and use these to solve problems. Calculate and interpret the mean as an average.
	Week 6	Assessments – SATs Practice/Revision
Summer 1	Week 1	Geometry: Properties Of Shape
	Week 2	 Draw 2-D shapes using given dimensions and angles. Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
	Week 3	KS2 SATS
	Week 4	
	Week 5	
Summer 2	Week 1	
	Week 2	
	Week 3	
	Week 4	
	Week 5	
	Week 6	
	Week 7	



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	

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

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		
factorise		
prime factor		
ascending/descending order		
digit total		
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	

how much less is?	doubling, halving	sixths, sevenths, eighths, tenths
difference between	array, row, column	hundredths, thousandths
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	ratio
inverse		percentage, per cent, %
ALGEBRA	MEASUREMENT	LENGTH
formula	measure	millimetre, centimetre, metre,
formulae	measurement	kilometre, mile
equation	size	yard, foot, feet, inch, inches
unknown	compare	length, height, width, depth, breadth
variable	unit, standard unit	long, short, tall
	metric unit, imperial unit	high, low
	measuring scale, division	wide, narrow
	guess, estimate	thick, thin
	enough, not enough	longer, shorter, taller, higher and
	too much, too little	so on
	too many, too few	longest, shortest, tallest, highest
	nearly, close to, about the same as,	and so on
	approximately	far, further, furthest, near, close
	roughly	distance apart between to
	just over, just under	from

		edge, perimeter, <mark>circumference</mark>
		area, covers
		square centimetre (cm ²), square
		metre (m ²), square millimetre (mm ²)
		ruler
		metre stick, tape measure
WEIGHT	CAPACITY AND VOLUME	TEMPERATURE
mass: big, bigger, small, smaller	litre, half litre, millilitre	temperature
weight: heavy/light, heavier/lighter,	centilitre, cubic centimetres(cm3),	degree
heaviest/lightest	cubic metres (m3), cubic millimetres	centigrade
tonne	(mm3), cubic kilometres (km3)	Celsius
pound	capacity	
ounce	volume	
kilogram, half kilogram, gram	full	
weigh, weighs, balances	empty	
heavy, light	more than	
heavier than, lighter than	less than	
heaviest, lightest	half full	
scales	quarter full	
	holds, contains	
	container, measuring cylinder	
	pint, gallon	
TIME	MONEY	PROPERTIES OF SHAPE
time	money	shape, pattern

days of the week, Monday, Tuesday	coin	flat, line
	penny, pence, pound	curved, straight
months of the year (January,	price, cost	round
February)	buy, bought, sell, sold	hollow, solid
seasons: spring, summer, autumn,	spend, spent	sort
winter	рау	make, build, construct, draw, sketch
day, week, weekend, fortnight,	change	perimeter
month, year, leap year, century,	dear, costs more	centre, radius, diameter
millennium	cheap, costs less, cheaper	circumference, concentric, arc
birthday, holiday	costs the same as	net, open, closed
morning, afternoon, evening, night	how much?	surface
bedtime, dinner time, playtime	how many?	angle, right-angled
today, yesterday, tomorrow	total	congruent
before, after	discount	intersecting, intersection
earlier, later	currency	plane
next, first, last	profit, loss	base, square-based
noon, midnight		size
calendar, date, date of birth		bigger, larger, smaller
now, soon, early, late, earliest, latest		symmetry, symmetrical, symmetrical
quick, quicker, quickest, quickly		pattern
slow, slower, slowest, slowly		line symmetry
old, older, oldest		reflect, reflection
new, newer, newest		axis of symmetry, reflective
takes longer, takes less time		symmetry

how long ago?		pattern, repeating pattern
how long will it be to?		match
how long will it take to?		regular, irregular
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		
Greenwich Mean Time, British		
Summer Time, International Date		
Line		
2D SHAPE	3D SHAPE	POSITION AND DIRECTION
2-D, two-dimensional	3-D, three-dimensional	position

corner, side	face, edge, vertex, vertices	over, under, underneath
point, pointed	cube, cuboid	above, below
rectangle (including square),	pyramid	top, bottom, side
rectangular, oblong	sphere, hemisphere, spherical	on, in, outside, inside
rectilinear	cone	around
circle, circular	cylinder, cylindrical	in front, behind
triangle, triangular	prism, triangular prism	front, back
equilateral triangle, isosceles	tetrahedron, polyhedron	beside, next to
triangle, scalene triangle	octahedron	opposite, apart, between
pentagon, pentagonal	dodecahedron	middle, edge
hexagon, hexagonal	net, open, closed	centre
heptagon		corner
octagon, octagonal		direction
quadrilateral		journey, route
parallelogram, rhombus, trapezium		left, right, up, down
kite		higher, lower
polygon		forwards, backwards, sideways
right-angled		across
parallel, perpendicular		next to, close, near, far
x-axis, y-axis, quadrant		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
		reflex 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
pie chart	explain your method
label, title, axis, axes	describe the pattern
diagram	describe the rule
most popular, most common	investigate
least popular, least common	recognise
maximum/minimum value	describe
outcome	draw
mean (mode, median, range as estimates for this)	compare
statistics, distribution	sort
	greatest value, least value
	mental calculation, written calculation
	statement
	justify
	make a statement
	explain your reasoning

Progression in MATHS

	EYFS	YEAR 1	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	Ma2/2.1b 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)	Ma4/2.1b 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 line, and use the language of: equal to, more than, less	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.

		than (fewer), most,					
		least					
	Number	Ma1/2.1e	Ma2/2.1e	Ma3/2.1e	Ma4/2.1e	Ma5/2.1e	
	recognition and	read and write	read and write numbers	read and write	order and compare	solve number	
	formation to 10	numbers from 1 to	to at least 100 in	numbers up to	numbers beyond	problems and	
		20 in numerals and	numerals and in words	1,000 in numerals	1,000	practical problems	
		words.		and in words		that involve all of	
						the above	
			Ma2/2.1f	Ma3/2.1f	Ma4/2.1f	Ma5/2.1f	
			use place value and	solve number	identify, represent	read Roman	
			number facts to solve	problems and	and estimate	numerals to 1,000	
			problems.	practical problems	numbers using	(M) and recognise	
			l'.	involving these	different	years written in	
				ideas.	representations	, 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
		read, write and	solve problems with		add and subtract	add and subtract	2.2c and 2.2e are
Subtraction		interpret	addition and subtraction:		numbers with up to	whole numbers	multiplication and

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

		adding 2 ono			
		- adding 5 one-	1		
		digit numbers			
	Ma1/2.2d	Ma2/2.2d		Ma5/2.2d	Ma6/2.2d
	solve one-step	show that addition of 2		solve addition and	perform mental
	problems that	numbers can be done in		subtraction multi-	calculations,
	involve addition and	any order (commutative)		step problems in	including with
	subtraction, using	and subtraction of one		contexts, deciding	mixed operations
	concrete objects and	number from another		which operations	and large numbers.
	pictorial	cannot		and methods to	
	representations, and			use and why.	
	missing number				
	problems such as 7 =				
	? - 9.				
		Ma2/2.2e recognise	Ma3/2.2e solve		
		and use the inverse	problems, including		
		relationship between	missing number		
		addition and subtraction	problems, using		
		and use this to check	number facts, place		
		calculations and solve	value, and more		
		missing number	complex addition		
		problems.	and subtraction.		
					Ma6/2.2f
					use their
					knowledge of the
					order of operations
					to carry out
					involving the 4
-					operations
					IVIAD/2.2g
					subtraction multi
					subulaction multi-
					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
Multiplication & Division	Ma1/2.3a solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Ma2/2.3a recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Ma3/2.3a recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	Ma4/2.3a recall multiplication and division facts for multiplication tables up to 12 × 12	Ma5/2.3a identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.	of accuracy. Ma6/2.2a multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
		Ma2/2.3b calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	Ma3/2.3b write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two- digit numbers times one-digit numbers,	Ma4/2.3b use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers	Ma5/2.3b know and use the vocabulary of prime numbers, prime factors and composite (non- prime) numbers	Ma6/2.2b divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number

		using mental and progressing to formal written methods			remainders, fractions, or by rounding, as appropriate for the context
	Ma2/2.3c show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot	Ma3/2.3c solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.	Ma4/2.3c recognise and use factor pairs and commutativity in mental calculations	Ma5/2.3c establish whether a number up to 100 is prime and recall prime numbers up to 19	Ma6/2.2c divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
	Ma2/2.3d solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.		Ma4/2.3d multiply two-digit and three-digit numbers by a one- digit number using formal written layout	Ma5/2.3d multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	
			Ma4/2.3e solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by 1 digit,	Ma5/2.3e multiply and divide numbers mentally drawing upon known facts	Ma6/2.2e identify common factors, common multiples and prime numbers

		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	
			MaE /2 2h	
			rocognico and uco	
			square numbers	
			and cube numbers	
			and the notation	
			for squared (2) and	
			cubed (3)	
			cubeu (3)	
			Ma5/2.3i	
			solve problems	
			involving	

	recognise, find and	IVIaz/2.4b	recognise, find and	IVIa4/2.4b	identify, name and	compare and order
			one-digit numbers or quantities by 10			aenomination
			parts and in dividing			in the same
	quantity	objects or quantity	object into 10 equal		same number	to express fractions
	object, shape or	length, shape, set of	from dividing an	equivalent fractions	all multiples of the	common multiples
	equal parts of an	1/4, 2/4 and 3/4 of a	that tenths arise	families of common	denominators are	fractions; use
	name a half as 1 of 2	and write fractions 1/3.	in tenths: recognise	using diagrams.	fractions whose	factors to simplify
Fractions	recognise find and	recognise find name	count up and down	recognise and show	compare and order	use common
Fractions	Ma1/2.4a	Ma2/2 4a	Ma3/2.4a	Ma4/2.4a	Ma5/2.4a	Ma6/2.3a
					simple rates	
l					nactions and problems involving	
					fractions and	
					aivision, including	
					multiplication and	
					involving	
					solve problems	
					Ma5/2.3k	
					equals sign	
					meaning of the	
					understanding the	
					these, including	
					combination of	
					division and a	
					multiplication and	
l					subtraction	
					involving addition	
					solve problems	
					multiples, squares	
					factors and	
					knowledge of	
					using their	
					division, including	
					multiplication and	

	name a quarter as 1	write simple fractions,	write fractions of a	count up and down	write equivalent	fractions, including
	of 4 equal parts of an	for example $1/2$ of 6 = 3	discrete set of	in hundredths;	fractions of a given	fractions >1
	object, shape or	and recognise the	objects: unit	recognise that	fraction,	
	quantity.	equivalence of 2/4 and	fractions and non-	hundredths arise	represented	
		1/2.	unit fractions with	when dividing an	visually, including	
			small denominators	obiect by a 100 and	tenths and	
				dividing tenths by	hundredths	
				10.		
			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
			Sindi denominators	divide quantities	mathematical	of equivalent
				including non-unit	statements > 1 as a	fractions
				fractions where the	mixed number	in decions
				answor is a whole	$a = \frac{2}{5} + \frac{4}{5} = \frac{6}{5}$	
				allswel is a whole	e.g. $2/3 + 4/3 = 0/3$	
			Ma 2 /2 Ad			
			IVIa3/2.40	IVIA4/2.40	IVIa5/2.40	IVIA6/2.30
			recognise and snow,			multiply simple
			using diagrams,	fractions with the	fractions with the	pairs of proper
			equivalent fractions	same denominator	same denominator	tractions, writing
			with small		and denominators	the answer in its
			denominators		that are multiples	simplest form
					of the same	
					number	
			ivia3/2.4e	IVIA4/2.4e	IVIa5/2.4e	IVIa6/2.3e
						alteriation and a
			add and subtract	recognise and write	multiply proper	divide proper
			add and subtract fractions with the	recognise and write decimal equivalents	multiply proper fractions and	divide proper fractions by whole
			add and subtract fractions with the same denominator	recognise and write decimal equivalents of any number of	multiply proper fractions and mixed numbers by	divide proper fractions by whole numbers
			add and subtract fractions with the same denominator within one whole	recognise and write decimal equivalents of any number of tenths or	multiply proper fractions and mixed numbers by whole numbers,	divide proper fractions by whole numbers
			add and subtract fractions with the same denominator within one whole	recognise and write decimal equivalents of any number of tenths or hundredths	multiply proper fractions and mixed numbers by whole numbers, supported by	divide proper fractions by whole numbers
			add and subtract fractions with the same denominator within one whole	recognise and write decimal equivalents of any number of tenths or hundredths	multiply proper fractions and mixed numbers by whole numbers, supported by materials and	divide proper fractions by whole numbers

		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.	Ma4/2.4g 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	Ma5/2.4j solve problems involving number	Ma6/2.3j solve problems which require

			problems involving fractions and decimals to 2 decimal places	up to 3 decimal places	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.
				Ma5/2.4l 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

						Ma6/2.5b 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
						possibilities of
						combinations of 2
						variables.
					• -	
Measurement	Ma1/3.1a	Ma2/3.1a	Ma3/3.1a	Ma4/3.1a	Ma5/3.1a	Ma6/3.1a
Measurement	Ma1/3.1a compare, describe	Ma2/3.1a choose and use	Ma3/3.1a measure, compare,	Ma4/3.1a convert between	Ma5/3.1a convert between	Ma6/3.1a solve problems
Measurement	Ma1/3.1a compare, describe and solve practical	Ma2/3.1a choose and use appropriate standard	Ma3/3.1a measure, compare, add and subtract:	Ma4/3.1a convert between different units of	Ma5/3.1a convert between different units of	Ma6/3.1a solve problems involving the
Measurement	Ma1/3.1a compare, describe and solve practical problems for:	Ma2/3.1a choose and use appropriate standard units to estimate and	Ma3/3.1a measure, compare, add and subtract: lengths	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure	Ma6/3.1a solve problems involving the calculation and
Measurement	Ma1/3.1a compare, describe and solve practical problems for:	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm	Ma6/3.1a solve problems involving the calculation and conversion of units
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm);	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g);	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g);	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, I and	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights e.g. long /	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C);	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, I and ml	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights e.g. long / short, longer	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, I and mI	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights e.g. long / short, longer / shorter,	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit,	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, I and mI	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights e.g. long / short, longer / shorter, tall / short,	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales,	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, I and mI	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights e.g. long / short, longer / shorter, tall / short, double / half	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, I and ml	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights e.g. long / short, longer / shorter, tall / short, double / half - mass /	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, I and mI	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights e.g. long / short, longer / shorter, tall / short, double / half - mass / weight	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, I and mI	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights e.g. long / short, longer / shorter, tall / short, double / half - mass / weight e.g. heavy,	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, I and ml	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights e.g. long / short, longer / shorter, tall / short, double / half - mass / weight e.g. heavy, light,	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, l and ml	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights e.g. long / short, longer / shorter, tall / short, double / half - mass / weight e.g. heavy, light, heavier	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, l and ml	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate
Measurement	Ma1/3.1a compare, describe and solve practical problems for: - lengths and heights e.g. long / short, longer / shorter, tall / short, double / half - mass / weight e.g. heavy, light, heavier than, lighter	Ma2/3.1a choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	Ma3/3.1a measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Ma4/3.1a convert between different units of measure	Ma5/3.1a convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, l and ml	Ma6/3.1a solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate

	 capacity and volume e.g. full, empty, more than, less than, quarter 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	Ma2/3.1c	Ma3/3.1c	Ma4/3.1c	Ma5/3.1c	Ma6/3.1c
	the value of different	symbols for pounds (f)	amounts of money	rectilinear shapes	calculate the	miles and
	denominations of	and pence (p); combine	to give change,	by counting squares	perimeter of	kilometres
	coins and notes	amounts to make a	using both £ and p		composite	
		particular value	in practical contexts		rectilinear shapes	
					in centimetres and	
	Ma1/3 1d	Ma2/3 1d	Ma3/3 1d	Ma4/3 1d	Ma5/3 1d	Ma6/3 1d
	sequence events in	waz/ J.tu	11103/3.14	estimate compare	calculate and	recognise that
	sequence events in			compare		recognise that

	chronological order using language e.g. before and after, next, first today, yesterday, tomorrow, morning, afternoon and evening	find different combinations of coins that equal the same amounts of money	tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12- hour and 24-hour clocks	and calculate different measures, including money in pounds and pence	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	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	Ma2/3.1e 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	Ma4/3.1e 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	Ma3/3.1g compare durations of events e.g. calculate the time taken by		Ma5/3.1g use all four operations to solve problems involving measure using	Ma6/3.1g calculate, estimate and compare volume of cubes and cuboids using standard units,
		clock face to show these times. Ma2/3.1h know the number of minutes in an hour and the number of hours in a	particular events or tasks		decimal notation including scaling. e.g. length, mass, volume, money	including cubic centimetres (cm3) and cubic metres (m3), and extending to other units e.g. mm3 and km3
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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	day 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, including the number of edges, vertices and faces	Ma3/3.2b recognise angles as a property of shape or a description of a turn Ma3/3.2c	Ma4/3.2b identify acute and obtuse angles and compare and order angles up to 2 right angles by size Ma4/3.2c	Ma5/3.2b know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Ma5/3.2c	Ma6/3.2b recognise, describe and build simple 3- D shapes, including making nets Ma6/3.2c
		IVIAZ/3.2C	IVI83/3.2C	IVIa4/3.2C	IVI85/3.2C	compare and

	identify 2-D shapes on the surface of 3-D shapes e.g. a circle on a cylinder, a triangle on a pyramid	identify right angles, recognise that 2 right angles make a half-turn, 3 make three quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle	identify lines of symmetry in 2-D shapes presented in different orientations	draw given angles, and measure them in degrees (o)	classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
	Ma2/3.2d compare and sort common 2-D and 3-D shapes and everyday objects.	Ma3/3.2d identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	Ma4/3.2d complete a simple symmetric figure with respect to a specific line of symmetry.	Ma5/3.2d identify: angles at a point and 1 whole turn (total 3600) angles at a point on a straight line and half a turn (total 1800) other multiples of 900	Ma6/3.2d illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
				Ma5/3.2e use the properties of rectangles to deduce related facts and find missing lengths and angles	Ma6/3.2e recognise angles where they meet at a point, are on a 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.	
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 Ma4/3.3c plot specified points		Ma6/3.3b draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
-	Ma1/3.3a describe position, directions and movements, including whole, half, quarter and three- quarter turns.	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 sequencesMa2/3.3b use mathematical vocabulary to describe position, direction and movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter turnsImage: display="block">Ma2/3.3b use mathematical vocabulary to describe position, direction and movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter turns (clockwise and anti- clockwise).	Ma1/3.3a Ma2/3.3a describe position, directions and movements, including whole, half, quarter and three- quarter turns. Ma2/3.3a Ma1/3.3a Combinations of mathematical objects in patterns and sequences Mature and three- quarter turns. 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).	Ma1/3.3a Ma2/3.3a Ma4/3.3a describe position, directions and movements, including whole, half, quarter and three- quarter turns. Ma2/3.3b Ma4/3.3b Ma2/3.3b wse mathematical ocabulary to describe position, direction and 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 Ma4/3.3b Ma2/3.3b Ma4/3.3b Ma4/3.3b Ma4/3.3b Wse mathematical vocabulary to describe position, direction and 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). Ma4/3.3c Ma4/3.3c Ma4/3.3c	Ma1/3.3a Ma2/3.3a Ma2/3.3a describe position, directions and movements, including whole, half, quarter and three- quarter turns. Ma2/3.3a Ma2/3.3a Ma2/3.3b order and arrange combinations of mathematical objects in patterns and sequences Ma4/3.3a Ma5/3.3a Ma1/3.3a Ma2/3.3b use mathematical Ma2/3.3b use mathematical vocabulary to describe position, direction and movement in a straight line and distinguishing between regular and three-quarter turns Ma2/3.3b use mathematical vocabulary to describe position, direction and movement in a straight line and distinguishing between regular and three-quarter turns Ma2/3.3b describe movements and distinguishing between regular and three-quarter turns Ma2/3.3b use mathematical vocabulary to describe position, direction and movement in a straight line and distinguishing between regular and three-quarter turns (clockwise). Ma4/3.3b describe movements a translations of a given unit to the left/right and up/down Ma2/3.3c Ma2/3.3c Ma2/3.3c

				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.				

What will MATHS look like in the classroom?

THE WEEK'S LESSONS

Monday	Tuesday	Wednesday	Thursday	Friday
	Assess and revisit			

From Monday to Thursday, lessons are taught to follow the unit shown on the medium-term plans. Friday's lesson is an <u>assess and</u> <u>revisit</u> lesson.

<u>Assess</u>

During this lesson, a short informal 'low-stakes' assessment (of no more than three questions) takes place to give an indication of the child's understanding of the skills learned from that week.

<u>Recap</u>

Following the assessment, children will work on <u>core skills</u> learned in previous weeks. This enables knowledge to stay 'fresh' in the children's memory and ensure that core skills are embedded securely for use in other contexts.

During this assess and revise lesson, the class Times Table will be assessed using a standard test.

TIMES TABLES

In Years 1-5, each daily maths lesson begins with a five minute times table starter. This is based on the times table (or 'counting in' skill below Year 2) target for each term, as detailed in each year group's curriculum overview (see p11, p21, p33, p45).

This activity will take the form of chanting the times table (research has shown this to be the most impactful method), although visual representations should initially be used with Year 1 and Year 2 children, such as grouping objects in arrays as below:



Arrays using dots should also be used to represent times tables to make links with the method used for multiplication in Year 1 and 2.

Children in KS2 should be supported initially with the times table written on the board or screen, then removing some to encourage recall.

Times tables should be chanted as "one 2 is 2, two 2s are 4, three 2s are 6, four 2s are 8". This enables to children to chant in a <u>rhythm</u> and research shows that this impacts positively on memorising each fact.

The key to learning times tables effectively is <u>repetition</u>. This means that the starter activity to each maths lesson will be identical or very similar to the previous day's starter.

Other activities can be used, such as songs or games. However, these should only be used to further embed facts when the times table has been sufficiently learned through chanting.

Once children are secure in saying the times table in order, they should then be given verbal questions out of table order, e.g.:

"What are six 2s?" "What is 9 x 2?" "What are three lots of 2?" "What is the product of 5 and 2?"

As shown in the example above, question language should be varied to encourage flexibility.

When children are secure in answering times table question out of order, they should then also practise related division facts, e.g.:

"How many 2s make 18?" "If 14 is the answer, what is the question?" "What is 8 divided by 2?"

While speed of recall is important once a times table has been initially learned, children should be given reasonable recall and thinking time during the initial learning stage. Some children will recall facts more quickly than others and it is vital that other children do not get left behind during this process.

REASONING RIDDLE

Following Times Table practice, Maths lessons on Monday – Thursday will then progress to a **Reasoning Riddle**. These are whole-class activities aimed to increase confidence and ability in answering reasoning questions. They are designed to emulate the question type and challenge of questions found in SAT Reasoning papers. Reasoning Riddles are used in every year group, from EYFS to Year 6.

Monday's Reasoning Riddle introduces a question type which is then worked through and modelled by the teacher with minimal questioning. Here is an example from Year 6:





For the following days, the same question type is used, with different information. Throughout the week, children will answer these questions with increasing independence as confidence improves.

Here is another Year 6 Reasoning Riddle from later in the week:



The method of solving each Reasoning Riddle will remain the same throughout each week to ensure that skills are securely embedded.

In EYFS, children are shown a picture which the teacher will use as a stimulus for number talk.

Here is an example:



Using the picture, the teacher might ask:

- How many sheep are there inside the shed?
- How many sheep are outside?
- How many sheep are there altogether?

This conversation enables the teacher to practise counting skills within 10 and begin to introduce simple addition and subtraction.

MAIN LESSON

Children are taught using clear modelling of methods and skills by the teacher. Children work either individually on tasks, or in pairs or small groups. Tasks are matched to the year group objective being learned and all children are taught to achieve this objective. Differentiation is provided by support for those working below age-related expectations and challenge is given to those working above age-related expectations using problem-solving and reasoning tasks. Children working significantly below age-related expectations will work towards similar stage-appropriate objectives. The "Ready To Progress" documents provide a structure for teaching children working significantly below age-related expectations and ensures that key core skills are learned in order and built on sequentially.

Daily Maths lessons will consist of a main task which will focus on fluency skills or key methods. They will provide repeated practice to make sure that new skills are embedded effectively or recapped to ensure secure knowledge retention.

There will be an independent reasoning task available in all lessons and it is an expectation that all children will access this. Children will progress to this once their main task has been checked by an adult. The reasoning task is placed in the classroom to be easily accessed without the need to ask an adult to ensure that no learning time is wasted. In some lessons, there may be a need for individual children to have further practice of fluency key skills and may not be ready to use these skills in a reasoning context.

There may also be occasions where a Maths lesson is used to recap, embed or clarify misconceptions that have been identified by the class teacher and this may affect the structure of the lesson.

CONCRETE, PICTORIAL, ABSTRACT

Children will use **concrete**, **pictorial** and **abstract** methods of calculation.



Concrete is the 'doing' stage – physically moving objects to explore a concept. This helps bring the maths to life. Every abstract concept is first introduced using physical, concrete objects.

When learning a new concept, **concrete** materials and objects are used to aid calculation. For example, Numicon is used in EYFS to learn numbers to 10, number bonds to ten and whether each number is odd or even. A number sentence is written to record the question and answer calculated. In the example image above, one cube has been added to two cubes to show the calculation of 2 + 1 = 3.

Pictorial methods use images to <u>represent</u> the **concrete** materials. This stage encourages children to make a mental connection between the physical object they just handled and the abstract pictures, diagrams or models that represent the objects from the problem. Building or drawing a model makes it easier for children to grasp difficult abstract concepts (for example, fractions). Simply put, it helps children visualise abstract problems and make them more accessible.

These methods bridge the gap between **concrete** and **abstract** methods. In the example image above, the cubes from the **concrete** method have become coloured squares. Two green squares are combined with one purple square to represent 2 + 1 = 3. A number sentence is written to record the question and answer calculated.

The **abstract** stage uses only symbols and numerals to model the problem or calculation. The teacher uses operational symbols (+, –, x, ÷) to indicate addition, subtraction, multiplication or division.

PRESENTATION AND MARKING

When writing in books, children write numbers using one digit per square, e.g.:

When writing fractions, the <u>whole fraction</u> is written in one square.

Decimal points are placed on the line between squares.

Marking is done mainly within the lesson, following the school marking policy. Correct answers are ticked with green ink and errors are indicated with orange ink. Children then use red ink for corrections. If children self-correct errors, purple ink is used to show independent alterations.

Due to this 'instant feedback', misconceptions are identified rapidly and intervention can be given within the lesson itself. Where there are misconceptions that require more dedicated time, interventions may take place after the lesson.

Assessment

Children are assessed in the following ways:

- A short, 'low-stakes' formative assessment typically on Friday to assess the week's learning. This is done informally using a small number of key questions set by the teacher to identify gaps in understanding. These gaps can then be worked on in the Friday recap session.
- In each term, a formal assessment takes place which are based on the term's learning and are focused on the key objectives for the unit studied. These assessments *inform* teacher judgement and each child's assessment is based on a combination of these tests, their work during lessons and the teacher's in-depth knowledge of the child. Teacher judgements are recorded on SIMS



and Pupil Progress meetings then identify children at risk of not making good progress or achieving age-related expectations. Support is then put in place for these children.

SEN

At St Bartholomew's, we provide learning opportunities that enable all pupils to make good progress. Every child has an equal right to receive the maths curriculum in daily maths lessons of approximately one hour. There may be times when it is more appropriate for Foundation Stage or Key Stage 1 sessions to be approximately 45 minutes in length and for Key Stage 2 sessions to be over an hour. All children will have their specific needs met through differentiated work in conjunction with targets. Teacher or TA support time is planned for and provided in relation to identified needs for individuals and groups.

Monitoring and review

The phase leaders, alongside the maths leader and SLT, are responsible for monitoring and evaluating curriculum progress. This is done through book scrutiny, planning scrutiny, lesson observations, pupil interviews, staff discussions and audit of resources.