'Roots to Grow and Wings to Fly'

Curriculum Progression Document

Maths

'Roots to Grow and Wings to Fly'

St Bartholomew's Maths Curriculum

INTENT

We believe that all children should have:

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

IMPLEMENTATION

Our maths curriculum aims to ensure that all pupils:

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

Contents:

EYFS MATHS Curriculum Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	The children will acquire a deep understanding of number to 10. They will learn about the composition of each number. They will learn to subitise (recognise quantities without counting) to five. They will automatically recall number bonds up to five and some number bonds to 10, including double facts. The children will learn to count verbally beyond 20, recognising the pattern of the counting system. They will compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. The children will explore and represent patterns with numbers up to 10, including odds and evens, double facts and how quantities can be distributed evenly.					
	• 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)	• 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)	• Understanding of Numbers to 10 • Introducing zero • Subitise (recognising quantities without counting) to 5 • Recall number bonds to 5/10 • Addition – combining two groups to find the whole • Exploring Bonds to 10 • Subtraction • Knowledge of more and less and distribution of quantities evenly • Spatial awareness • 2D Shape • 3D Shape	• Understanding of Numbers to 10 • Introducing zero • Subitise (recognising quantities without counting) to 5 • Recall number bonds to 5/10 • Addition – combining two groups to find the whole • Exploring Bonds to 10 • Subtraction • Knowledge of more and less and distribution of quantities evenly • Spatial awareness • 2D Shape • 3D Shape	• Counting to 20 • Understanding of Numbers to 10 • Introducing zero • Subitise (recognising quantities without counting) to 5 • Recall number bonds to 5/10 • Addition – combining two groups to find the whole • Exploring Bonds to 10 • Subtraction • Knowledge of more and less and distribution of quantities evenly • Making simple patterns and exploring more complex patterns • Doubling • Halving & sharing • Odds and evens • Length, height and distance • Weight • Capacity	• Counting to 20 • Understanding of Numbers to 10 • Introducing zero • Subitise (recognising quantities without counting) to 5 • Recall number bonds to 5/10 • Addition – combining two groups to find the whole • Exploring Bonds to 10 • Subtraction • Knowledge of more and less and distribution of quantities evenly • Making simple patterns and exploring more complex patterns • Doubling • Halving & sharing • Odds and evens • Length, height and distance • Weight • Capacity

EYFS Maths Vocabulary

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

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

CAPACITY AND VOLUME	TIME	MONEY
full empty half full holds container	time days of the week, Monday, Tuesday … day, week birthday, holiday morning, afternoon, evening, night bedtime, dinner time, playtime today, yesterday, tomorrow before, after, next, last now, soon, early, late quick, quicker, quickest, quickly slow, slower, slowest, slowly old, older, oldest, new, newer, newest takes longer, takes less time hour, o'clock, clock, watch, hands	money coin penny, pence, pound price, cost buy, sell spend, spent pay
PROPERTIES OF SHAPE	2D Shape	3D Shape
shape, pattern flat, curved, straight round, hollow, solid sort, make, build, draw size, bigger, larger, smaller symmetrical pattern, repeating pattern match	corner, side rectangle (including square) circle triangle	face, edge, vertex, vertices cube pyramid sphere cone

POSITION AND DIRECTION	STATISTICS	GENERAL
position over, under, above, below top, bottom, side on, in, outside, inside around, in front, behind front, back, beside, next to opposite apart between 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	count, sort group, set list	pattern puzzle what could we try next? how did you work it out? recognise describe draw compare sort

KS1 Curriculum Overviews

YEAR 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	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.	Recognise and know the value of different denominations of coins and notes 2-D shapes [for example, rectangles (including squares), circles and triangles] 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].	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.	Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] Measure and begin to record time (hours, minutes, seconds) Recognise and know the value of different denominations of coins and notes Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening].	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] 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:	Describe position, direction and movement, including whole, half, quarter and three-quarter turns. 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

	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.		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. 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.	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/half] Measure and begin to record lengths and heights	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.	
TIMES TABLE OBJECTIVE	Count in multiples of 10 in order up to 120.	Count in 2's up to 24, linking with even numbers and supporting doubles. Count in multiples of 10 in order up to 120.		Focus on counting in multiples of 5 up to 60, linking with knowledge of counting in 10s. Continue to develop fluency of counting in 2's and 10's.	Count in multiples of 10, 2 and 5 in order with growing fluency.	Count in multiples of 10, 2 and 5 in order fluently.

Year 1 Maths Vocabulary

Words in red denote new vocabulary for the year group

NUMBER	PLACE VALUE	ADDITION AND SUBTRACTION
number, numeral	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 multiply multiplied by multiple division dividing grouping sharing doubling halving array number patterns	fraction equal part equal grouping equal sharing parts of a whole half one of two equal parts quarter one of four equal parts	measure measurement size compare guess, estimate enough, not enough too much, too little too many, too few nearly, close to, about the same as roughly just over, just under
LENGTH	WEIGHT	CAPACITY AND VOLUME
centimetre, metre length, height, width, depth long, short, tall, high, low wide, narrow, thick, thin longer, shorter, taller, higher longest, shortest, tallest, highest far, near, close ruler metre stick	kilogram, half kilogram weigh, weighs, balances heavy, light heavier than, lighter than heaviest, lightest scales	litre, half litre capacity volume full, empty more than less than half full quarter full 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	pay	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 point, pointed rectangle (including square) circle triangle	face, edge, vertex, vertices cube, cuboid pyramid sphere cone cylinder	position over, under, underneath, above, below top, bottom, side on, in, outside, inside around, in front, behind 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 group, set list, table	pattern puzzle 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 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. Can solve problems with addition and subtraction: • using concrete objects and pictorial representations, including those involving numbers, quantities and measures • applying their increasing	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. 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.	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the 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.	Recognise, find, name and write fractions 1/3, 1/4, 2/4, and 3/4 of a length, shape, set of objects or quantity. Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2 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 = 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.	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 lengths, volume and record the results using >, < and = 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).	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 = 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.

	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.					
TIMES TABLE OBJECTIVE	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..

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

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

MEASUREMENT	LENGTH	WEIGHT
measure, measurement size compare, measuring scale guess, estimate enough, not enough too much, too little, too many, too few nearly, close to, about the same as roughly just over, just under	centimetre, metre length, height, width, depth long, short, tall, high, low wide, narrow, thick, thin longer, shorter, taller, higher longest, shortest, tallest, highest far, further, furthest, near, close ruler metre stick, tape measure	kilogram, half kilogram, gram weigh, weighs, balances heavy, light heavier than, lighter than heaviest, lightest scales
CAPACITY AND VOLUME	TEMPERATURE	MONEY
litre, half litre, millilitre capacity volume full empty more than less than half full quarter full holds, contains container	temperature degree	money, coin penny, pence, pound price, cost buy, bought, sell, sold spend, spent pay, change dear, costs more cheap, costs less, cheaper costs the same as how much …?, how many …? 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
seasons: spring, summer, autumn, winter	above, below	represent
day, week, weekend, fortnight, month, year	top, bottom, side	group, set
birthday, holiday	on, in	list, table
morning, afternoon, evening, night	outside, inside	label, title
bedtime, dinnertime, playtime	around	most popular, most common
today, yesterday, tomorrow	in front, behind	least popular, least common
before, after	front, back	
earlier, later	beside, next to	
next, first, last	opposite	
midnight	apart	
date	between	
now, soon, early, late	middle, edge	
quick, quicker, quickest, quickly	centre	
slow, slower, slowest, slowly	corner	
old, older, oldest	direction	
new, newer, newest	journey, route	
takes longer, takes less time	left, right	
how long ago?	up, down	
how long will it be to …?	higher, lower	
	forwards, backwards, sideways	
	across	
	next to, close, near, far	

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 clock, clock face, watch, hands digital/analogue clock/watch, timer hour hand, minute hand hours, minutes, seconds	along through to, from, towards, away from clockwise, anticlockwise movement slide roll turn stretch, bend whole turn, half turn, quarter turn, three-quarter turn right angle straight line	
PROPERTIES OF SHAPE	2D SHAPE	3D SHAPE
shape, pattern flat curved, straight round hollow, solid sort make, build, draw surface size bigger, larger, smaller	corner, side point, pointed rectangle (including square), rectangular circle, circular triangle, triangular pentagon hexagon octagon	face, edge, vertex, vertices cube, cuboid pyramid sphere cone cylinder

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 4, 8, 50 and 100; find 10 or 100 more or less than a given number Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) Compare and order numbers up to 1000 Identify, represent and estimate numbers using different representations Read and write numbers up to 1000 in numerals and in words Solve number problems and practical problems involving these ideas. I can add and subtract numbers mentally, including: • a three-digit number and ones	I can recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables I can write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods I 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.	I can count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-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 I can recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators I can recognise and show, using diagrams, equivalent fractions with small denominators I can add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7]	I can measure the perimeter of simple 2-D shapes I can add and subtract amounts of money to give change, using both £ and p in practical contexts I can draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks I can 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 I know the number of seconds in a minute and the number of days in each month, year and leap year I can compare durations of events [for example to calculate the time taken by particular events or tasks]. I can recognise angles as a property of shape or a description of a turn I can identify right angles, recognise that two right angles make a half-turn,	I can interpret and present data using bar charts, pictograms and tables I can 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. I can measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml)

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

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

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

CAPACITY AND VOLUME	TEMPERATURE	TIME
litre, half litre, millilitre capacity volume full empty more than less than half full quarter full holds, contains container	temperature degree centigrade Celsius	time days, Monday, Tuesday … months (January, February ...) seasons: spring, summer, autumn, winter day, week, weekend, fortnight, month, year, century, birthday, holiday morning, afternoon, evening, night bedtime, dinner time, playtime today, yesterday, tomorrow 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 penny, pence, pound price, cost, buy, bought, sell, sold spend, spent, pay, change dear, costs more, cheap, costs less, cheaper, costs the same as how much …? how many …? total	shape, pattern flat, curved, straight round, hollow, solid sort, make, build, draw perimeter, surface, size bigger, larger, smaller symmetry, symmetrical, symmetrical pattern line symmetry pattern, repeating pattern match 2-D shape	corner, side point, pointed rectangle (including square), rectangular circle, circular triangle, triangular pentagon, pentagonal hexagon, hexagonal octagon, octagonal quadrilateral right-angled parallel, perpendicular

3D SHAPE	POSITION AND DIRECTION	STATISTICS
face, edge, vertex, vertices cube, cuboid pyramid sphere, hemisphere cone cylinder prism, triangular prism	position, over, under, underneath, above, below, top, bottom, side on, in, outside, inside, around, in front, behind, 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 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	count, tally, sort, vote graph, block graph, pictogram represent group, set list, table, chart, bar chart, frequency table Carroll diagram, Venn diagram label, title, axis, axes diagram most popular, most common least popular, least common

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

YEAR 4 MATHS Curriculum Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Count in multiples of 6, 7, 9, 25 and 1000. Find 1000 more or less than a given number. Count backwards through zero to include negative numbers. Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). Order and compare numbers beyond 1000. 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.	Recall multiplication and division facts for multiplication tables up to 12 × 12 Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers 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.	Recognise and show, using diagrams, families of common equivalent fractions 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 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 Recognise and write decimal equivalents to 1/4, 1/2, 3/4 Find the effect of dividing a one- or two-digit number by	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Find the area of rectilinear shapes by counting squares Estimate, compare and calculate different measures, including money in pounds and pence Solve simple measure and money problems involving fractions and decimals to two decimal places. Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	Read, write and convert time between analogue and digital 12- and 24-hour clocks Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. 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.	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. 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. Measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml)

	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. Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate 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.		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 Convert between different units of measure [for example, kilometre to metre; hour to minute]			
TIMES TABLE OBJECTIVE	Recall multiples of 3,4 and 8 up to 12x in any order, including missing numbers and related division facts fluently. Fluently count in 6's in order up to 12x6, using multiples of 3 to support.	Recall multiples of 6 in any order, including missing numbers and related division facts with growing fluency. Fluently count in 7's in order up to 12x7.	Recall multiples of 6 in any order, including missing numbers and related division facts fluently. Recall multiples of 7 in any order, including missing numbers and related division facts with growing fluency.	Recall multiples of 7 in any order, including missing numbers and related division facts fluently. Fluently count in 9's in order up to 12x9. Fluently count in 11's in order up to 12x11.	Recall multiples of 9 in any order, including missing numbers and related division facts with growing fluency (using 10x and adjusting by 1 group to find 9x) Recall multiples of 11 in any order, including missing numbers and related division facts fluently. Fluently count in 12's in order up to 12x12.	Recall multiples of 9 in any order, including missing numbers and related division facts fluently. Recall multiples of 12 in any order, including missing numbers and related division facts with growing fluency (using 10x and adjusting by adding 2 more groups).

Year 4 Maths Vocabulary

Words in red denote new vocabulary for the year group

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

is the same as more, less most, least tally many odd, even multiple of, factor of 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	twenty-first, twenty-second … last, last but on before, after next between halfway between above, below	

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

CAPACITY AND VOLUME	TEMPERATURE	TIME
litre, half litre, millilitre capacity volume full empty more than less than half full quarter full holds, contains container, measuring cylinder	temperature degree centigrade Celsius	time days of the week, Monday, Tuesday … months of the year (January, February ...) seasons: spring, summer, autumn, winter day, week, weekend, fortnight, month, year, leap year, century, millennium 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
pay	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 face, edge, vertex, vertices cube, cuboid pyramid sphere, hemisphere, spherical cone cylinder, cylindrical prism, triangular prism tetrahedron, polyhedron	position over, under, underneath above, below top, bottom, side on, in outside, inside around in front, behind 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 compare numbers to at least 1,000,000 and determine the value of each digit 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 through 0 Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 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. Add and subtract whole numbers with more than 4	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Establish whether a number up to 100 is prime and recall prime numbers up to 19 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	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 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 + 4/5 = 6/5 = 1 and 1/5 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	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 (cm2) and square metres (m2) and estimate the area of irregular shapes Use all four operations to solve problems involving measure using decimal notation including scaling. e.g. length, mass, volume, money Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	Solve problems involving converting between units of time Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles 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.	Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables. Estimate volume e.g. using 1cm3 blocks to build cuboids (including cubes) and capacity e.g. using water 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.

	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.	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.	Read and write decimal numbers as fractions 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. Convert between different units of metric measure e.g. km and m, cm and m, cm and mm, g and kg, l and ml Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints			
TIMES TABLE OBJECTIVE	Recap 9x / 7x / 11x / 12x tables. All children to meet ARE requirements by half term.	Related division facts for 3x / 4x / 6x / 8x including missing numbers	Related division facts for 8x / 9x / 7x including missing numbers One step word problems involving times table facts (either multiplication or division)	Related division facts for 7x / 11x / 12x including missing numbers One/Two step word problems involving times table facts (either multiplication or division)	Two-step word problems using times table facts (either multiplication or division)	Two-step word problems using times table facts (either multiplication, division or both)

Year 5 Maths Vocabulary

Words in red denote new vocabulary for the year group

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

is the same as more, less most, least tally many odd, even multiple of, factor of 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	twenty-first, twenty-second … last, last but on before, after next between halfway between above, below	

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

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

	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 capacity volume full empty more than less than half full quarter full holds, contains container, measuring cylinder pint, gallon	temperature degree centigrade Celsius	time days of the week, Monday, Tuesday … months of the year (January, February ...) seasons: spring, summer, autumn, winter day, week, weekend, fortnight, month, year, leap year, century, millennium 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 coin penny, pence, pound price, cost buy, bought, sell, sold spend, spent pay change dear, costs more cheap, costs less, cheaper costs the same as how much …? how many …? total discount currency	shape, pattern flat, line curved, straight round hollow, solid sort make, build, construct, draw, sketch perimeter centre, radius, diameter surface angle, right-angled congruent base, square-based size bigger, larger, smaller symmetry, symmetrical, symmetrical pattern line symmetry reflect, reflection axis of symmetry, reflective symmetry	2-D, two-dimensional corner, side point, pointed rectangle (including square), rectangular, oblong rectilinear circle, circular triangle, triangular equilateral triangle, isosceles triangle, scalene triangle pentagon, pentagonal hexagon, hexagonal heptagon octagon, octagonal quadrilateral parallelogram, rhombus, trapezium polygon right-angled parallel, perpendicular x-axis, y-axis, quadrant

	pattern, repeating pattern match regular, irregular	
3D SHAPE	POSITION AND DIRECTION	
3-D, three-dimensional face, edge, vertex, vertices cube, cuboid pyramid sphere, hemisphere, spherical cone cylinder, cylindrical prism, triangular prism tetrahedron, polyhedron octahedron	position over, under, underneath above, below top, bottom, side on, in, outside, inside around in front, behind 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 coordinate movement slide, roll, turn, stretch, bend whole turn, half turn, quarter turn, three-quarter turn rotate, rotation angle, is a greater/smaller angle than degree right angle, acute angle, obtuse angle reflection straight line ruler, set square angle measurer, compass, protractor	

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

Progression in MATHS

	EYFS	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	**Ma2/2.1d** compare and order numbers from 0 up to 100; use <, > and = signs	**Ma3/2.1d** identify, represent and estimate numbers using different representations	**Ma4/2.1d** recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s and 1s)	**Ma5/2.1d** round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	**Ma6/2.1d** solve number and practical problems that involve all of the above.

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

Addition & Subtraction **(Addition, Subtraction, Multiplication and Division in Year 6)**		**Ma1/2.2a** read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	**Ma2/2.2a** 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	**Ma3/2.2a** add and subtract numbers mentally, including: • a three-digit number and 1s • a three-digit number and 10s • a three-digit number and 100s	**Ma4/2.2a** add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	**Ma5/2.2a** add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	***In Y6, skills 2.2a to 2.2c and 2.2e are multiplication and 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	**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	

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

							and methods to use and why
							Ma6/2.2h solve problems involving addition, subtraction, multiplication and division
							Ma6/2.2i use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
Multiplication & 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.	**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 (×),	**Ma3/2.3b** write and calculate mathematical statements for multiplication and division using the multiplication tables that they know,	**Ma4/2.3b** use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1;	**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

			division (÷) and equals (=) signs	including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	multiplying together 3 numbers		interpret remainders as whole number 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	**Ma5/2.3e** multiply and divide numbers mentally drawing upon known facts	**Ma6/2.2e** identify common factors, common multiples and prime numbers

					distributive law to multiply two digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.		
						Ma5/2.3f divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	
						Ma5/2.3g multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000	
						Ma5/2.3h recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)	

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

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

					tenths or hundredths	supported by materials and diagrams	
				Ma3/2.4f compare and order unit fractions, and fractions with the same denominators	**Ma4/2.4f** recognise and write decimal equivalents to ¼; ½; ¾	**Ma5/2.4f** read and write decimal numbers as fractions e.g. 0.71 = 71/100	**Ma6/2.3f** associate a fraction with division and calculate decimal fraction equivalents for a simple fraction.
				Ma3/2.4g solve problems that involve all of the above.	**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 problems involving fractions and decimals to 2 decimal places	**Ma5/2.4j** solve problems involving number up to 3 decimal places	**Ma6/2.3j** solve problems which require answers to be rounded to specified degrees of accuracy
						Ma5/2.4k recognise the per cent symbol (%) and understand that per cent relates to "number of parts per 100", and write percentages as a fraction with denominator 100, and as a decimal fraction	**Ma6/2.3k** recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
						Ma5/2.4l 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** 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

		heavier than, lighter than - 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 recognise and know the value of different denominations of coins and notes	**Ma2/3.1c** recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	**Ma3/3.1c** add and subtract amounts of money to give change, using both £ and p in practical contexts	**Ma4/3.1c** find the area of rectilinear shapes by counting squares	**Ma5/3.1c** measure and calculate the perimeter of composite rectilinear shapes	**Ma6/3.1c** convert between miles and kilometres

						in centimetres and metres	
		Ma1/3.1d sequence events in chronological order using language e.g. before and after, next, first today, yesterday, tomorrow, morning, afternoon and evening	**Ma2/3.1d** find different combinations of coins that equal the same amounts of money	**Ma3/3.1d** tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	**Ma4/3.1d** estimate, compare and calculate different measures, including money in pounds and pence	**Ma5/3.1d** calculate and compare the area of rectangles (including squares) including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes	**Ma6/3.1d** recognise that shapes with the same areas can have different perimeters and vice versa
		Ma1/3.1e recognise and use language relating to dates, including days of the week, weeks, months and years	**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 clock face to show these times.	**Ma3/3.1g** compare durations of events e.g. calculate the time taken by particular events or tasks		**Ma5/3.1g** use all four operations to solve problems involving measure using decimal notation including scaling. e.g. length, mass, volume, money	**Ma6/3.1g** calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units e.g. mm3 and km3
			Ma2/3.1h know the number of minutes in an hour and the number of hours in a day				
Properties of Shapes		**Ma1/3.2a** recognise and name common 2-D and 3-D shapes, including: - rectangles (including squares), circles and triangles - cuboids (including cubes), pyramids and spheres	**Ma2/3.2a** identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line	**Ma3/3.2a** draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	**Ma4/3.2a** compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	**Ma5/3.2a** identify 3-D shapes, including cubes and other cuboids, from 2-D representations	**Ma6/3.2a** draw 2-D shapes using given dimensions and angles
			Ma2/3.2b identify and describe the properties of 3-D shapes,	**Ma3/3.2b** recognise angles as a property of shape	**Ma4/3.2b** identify acute and obtuse angles and	**Ma5/3.2b** know angles are measured in	**Ma6/3.2b** recognise, describe and build simple 3-

			including the number of edges, vertices and faces	or a description of a turn	compare and order angles up to 2 right angles by size	degrees: estimate and compare acute, obtuse and reflex angles	D shapes, including making nets
			Ma2/3.2c identify 2-D shapes on the surface of 3-D shapes e.g. a circle on a cylinder, a triangle on a pyramid	**Ma3/3.2c** 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	**Ma4/3.2c** identify lines of symmetry in 2-D shapes presented in different orientations	**Ma5/3.2c** draw given angles, and measure them in degrees (o)	**Ma6/3.2c** compare and 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 360o) • angles at a point on a straight line and half a turn (total 180o) • other multiples of 90o	**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	**Ma6/3.2e** recognise angles where they meet at a point, are on a

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

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