# **Mathematics Band W**

Pupil's Name.....

Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Measurement	Properties of Shape	Position and Direction	Statistics	Ratio and Proportion	Algebra
No single band statements	No single band statements	No single band statements	No single band statements	No single band statements	No single band statements	No single band statements	No single band statements	No single band statements	No single band statements

# **Mathematics Band 1**

Pupil's Name	
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Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Measurement	Properties of Shape	Position and Direction	Statistics	Ratio and Proportion	Algebra
Count to and across 100, forwards and in tens from any number, forward and backward.  Count, read and write numbers to 100 in numerals,	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 involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Recognise, find and name a half as one of two equal parts of an object, shape or quantity.  Recognise, find and name a	Compare, describe and solve practical problems for lengths and heights e.g. long/short, longer/shorter, tall/short, double/half.  Compare, describe and solve practical problems for mass/weight e.g. heavy/light, heavier than, lighter than.  Compare, describe and solve practical problems for capacity	Recognise and name common 2-D shapes e.g. rectangles (including squares), circles and triangles.  Recognise and name common 3-D shapes e.g. cuboids (including	Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	No single band statements	No single band statements	No single band statements
count in multiples of twos, fives and tens.  Identify one more and one less of a given number.  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.	Solve one-step problems that involve addition and subtraction using concrete objects and pictorial representations and missing number problems such as 7 = ? – 9.		quarter as one of four equal parts of an object, shape or quantity.	and volume e.g. full/empty, more than, less than, half, half full, quarter.  Compare, describe and solve practical problems for time e.g. quicker, slower, earlier, later.  Read and write numbers from 1 to 20 in numerals and words.  Measure and begin to record mass/weight.  Measure and begin to record capacity and volume.  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 e.g. before and after, next, first, today, yesterday, tomorrow, morning, 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.	cubes), pyramids and spheres.				

Pupil's Name	
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Number	Addition and	Multiplication	Fractions	Measurement	Properties	Position and	Statistics	Ratio and	Algebra
and Place	Subtraction	and Division			of Shape	Direction		Proportion	
Value									
Count in steps	Solve problems with addition	Recall and use	Recognise,	Choose and use	Identify and	Order and arrange	Interpret and	No single band	No single
of 2, 3 and 5	and subtraction using concrete	multiplication and	find, name	appropriate standard	describe the	combinations of	construct simple	statements	band
from 0 and in	objects and pictorial	division facts for the	and write	units to estimate and	properties of 2-D	mathematical	pictograms, tally		statements
tens from any number forward	representations including those involving numbers,	2, 5 and 10 multiplication tables,	fractions 1/3, 1/4, 2/4 and 3/4	measure length/height in any direction (m/cm),	shapes, including the	objects in patterns and sequences.	charts, block diagrams and		
and backward.	quantities and measures.	including	of a length,	mass (kg/g);	number of sides	and sequences.	simple tables.		
and backward.	quantities and medicares.	recognising odd and	shape, set of	temperature (°C),	and line	Use mathematical	cimple tables.		
Recognise the	Solve problems with addition	even numbers.	objects or	capacity (litres/ml) to the	symmetry in a	vocabulary to	Ask and answer		
place value of	and subtraction applying		quantity.	nearest appropriate unit,	vertical line.	describe position,	simple questions		
each digit in a	his/her increasing knowledge	Calculate		using rulers, scales,		direction and	by counting the		
two-digit number	of mental and written methods.	mathematical	Write simple	thermometers and	Identify and	movement,	number of		
(tens, ones).	B 11 1 1100 1	statements for	fractions for	measuring vessels.	describe the	including	objects in each		
Identify	Recall and use addition and	multiplication tables	example, ½ of	Compare and arder	properties of 3-D	movement in a	category and		
Identify, represent and	subtraction facts to 20 fluently and derive and use related	and write them using the multiplication (x),	6 = 3 and recognise the	Compare and order lengths, mass,	shapes, including the	straight line and distinguishing	sorting the categories by		
estimate	facts up to 100.	division (÷) and	equivalence of	volume/capacity and	number of	between rotation	quantity.		
numbers using	lacte up to 100.	equals (=) signs.	2/4 and ½.	record the results using	edges, vertices	as a turn and in	quartity.		
different	Add and subtract numbers			>, < and =.	and faces.	terms of right	Ask and answer		
representations,	using concrete objects,	Show that		·		angles for quarter,	questions about		
including the	pictorial representations and	multiplication of two		Recognise and use	Identify 2-D	half and three-	totalling and		
number line.	mentally, including a two-digit	numbers can be		symbols for pounds (£)	shapes on the	quarter turns	comparing		
C	number and ones.	done in any order		and pence (p); combine	surface of 3-D	(clockwise and	categorical data.		
Compare and order numbers	Add and subtract numbers	(commutative) and division of one		amounts to make a particular value.	shapes e.g. a circle on a	anti-clockwise).			
from 0 up to	using concrete objects,	number by another		particulai value.	cylinder and a				
100, use <, >	pictorial representations and	cannot.		Find different	triangle on a				
and = signs.	mentally, including a two-digit			combinations of coins	pyramid.				
	number and tens.	Solve problems		that equal the same					
Read and write		involving		amounts of money.	Compare and				
numbers to at	Add and subtract numbers	multiplication and		l <u>.</u>	sort common 2-				
least 100 in	using concrete objects,	division, using		Solve simple problems	D and 3-D				
numerals and in words.	pictorial representations and mentally, including two two-	materials, arrays, repeated addition,		in a practical context involving addition and	shapes and				
words.	digit numbers.	mental methods and		subtraction of money of	everyday objects.				
Use place value	aigit Hamboro.	multiplication and		the same unit, including	objecto.				
and number	Add and subtract numbers	division facts.		giving change.					
facts to solve	using concrete objects,	including problems							
problems.	pictorial representations and	in contexts.		Compare and sequence					
	mentally, including adding			intervals of time.					
	three one-digit numbers.			Tall and write the time (					
	Show that addition of two			Tell and write the time to					
	numbers can be done in any			five minutes, including guarter past/to the hour					
	order (commutative) and			and draw the hands on a					
	subtraction of one number			clock face to show these					
	from another cannot.			times.					
	Recognise and use the inverse			Remember the number					
	relationship between addition and subtraction and use this to			of minutes in an hour and the number of hours					
	check calculations and solve			in a day.					
	missing number problems.			in a day.					

# **Mathematics Band 3**

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Count from 0 in multiplica of 4. 8. 3 and 100 functions of 3 and 100

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Number and	Addition and	Multiplication	Fractions	Measurement	Properties	Position and	Statistics	Ratio and	Algebra
Place Value	Subtraction	and Division			of Shape	Direction		Proportion	3
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 including measures.  Round any number to the nearest 10, 100 or 1000.  Solve number and practical problems that involve all t=of the above and with increasingly large positive numbers.  Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	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.	Recall multiplication and division facts for multiplication tables up to 12 x 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 commutatively 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 ¼, ½, ¾.  Find the effect of dividing a one or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.  Round decimals with one decimal place to the nearest whole number.  Compare numbers with the same number of decimal places up to two decimal places.  Solve simple measure and money problems involving fractions and decimals to two decimal places.	Convert between different units of measure e.g. kilometre to metre, hour to minute.  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.  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.	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.  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.  Begin to recognise where angles are greater than two right angles. Know the term straight angle referring to two right angles together.  Begin exploring line symmetry with two lines of symmetry.	Describe positions on a 2-D grid 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.	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.	No single band statements	No single band statements

### Mathematics - Band 5

Mathematics -	Band 5			Pupil's Name					
Number and Place	Addition	Multiplication and Division	Fractions	Measurement	Properties of	Position	Statistics	Ratio and	Algebra
Value	and Subtraction				Shape	and Direction		Proportion	
Read, write, order and	Add and	Identify multiples and factors,	Compare and order fractions whose	Convert between	Identify 3-D	Identify,	Solve	No single	No
compare numbers to	subtract	including finding all factor pairs of a	denominators are all multiples of the	different units of metric	shapes,	describe and	comparison,	band	single
at least 1 000 000 and	whole	number and common factors of two	same number.	measure (for example,	including cubes	represent	sum and	statements	band
determine the value of	numbers with more	numbers.	Identify, name and write equivalent	kilometre and metre,	and other cuboids, from 2-	the position of a shape	difference problems		state- ments
each digit.	than 4 digits,	Know and use the vocabulary of	fractions of a given fraction, represented	centimetre and metre; centimetre and	D Cubolus, Holli 2-	following a	using		IIIEIIIS
Count forwards or	including	prime numbers, prime factors and	visually, including tenths and	millimetre; gram and	representations.	reflection or	information		
backwards in steps of	using formal	composite (non-prime) numbers.	hundredths.	kilogram, litre and		translation,	presented in		
powers of 10 for any	written			millilitre).	Know angles are	using the	a line graph.		
given number up to 1	methods	Establish whether a number up to	Recognise mixed numbers and improper		measured in	appropriate			
000 000.	(columnar	100 is prime and recall prime	fractions and convert from one form to	Understand and use	degrees:	language	Complete,		
Interpret possible	addition and	numbers up to 19.	the other and write mathematical	approximate	estimate and	and know	read and		
Interpret negative numbers in context,	subtraction).	Multiply numbers up to 4 digits by a	statements > 1 as a mixed number e.g. 2/5 + 4/5 = 5/6 = 1 1/5.	equivalence between metric units and	compare acute, obtuse and	that the shape has	interpret information		
count forwards and	Add and	one or two-digit number using a	2/3 + 4/3 = 3/0 = 1 1/3.	common imperial units	reflex angles.	not	in tables,		
backwards with	subtract	formal written method, including long	Add and subtract fractions with the same	such as inches,	Tollox arigico.	changed.	including		
positive and negative	numbers	multiplication for two-digit numbers.	denominator and denominators that are	pounds and pints.	Draw given	3.19.5	timetables.		
whole numbers,	mentally		multiples of the same number.		angles and				
including through zero.	with	Multiply and divide numbers		Measure and calculate	measure them in				
	increasingly	mentally drawing upon known facts.	Multiply proper fractions and mixed	the perimeter of	degrees (°).				
Round any number up	large		numbers by whole numbers, supported	composite rectilinear					
to 1 000 000 to the	numbers.	Divide numbers up to 4 digits by a	by materials and diagrams.	shapes in centimetres	Identify angles				
nearest 10, 100, 1000, 10 000 and 100 000.	Use	one-digit number using the formal written method of short division and	Read and write decimal numbers as	and metres.	at a point and one whole turn				
10 000 and 100 000.	rounding to	interpret remainders appropriately	fractions e.g. 0.71 = 71/100.	Calculate and	(total 360°).				
Solve number	check	for the context.	11dollo115 6.g. 6.71 = 717100.	compare the area of	(total ood ).				
problems and practical	answers to		Recognise and use thousandths and	rectangles (including	Identify angles				
problems that involve	calculations	Multiply and divide whole numbers	relate them to tenths, hundredths and	squares), and	at a point on a				
ordering and	and	and those involving decimals by 10,	decimal equivalents.	including using	straight line and				
comparing numbers to	determine,	100 and 1000.		standard units, square	½ a turn (total				
1 000 000 counting	in the		Round decimals with two decimal places	centimetres (cm²) and	180°).				
forwards or backwards	context of a	Recognise and use square numbers	to the nearest whole number and to one	square metres (m²)	lala mitito cathan				
in steps, interpreting negative numbers and	problem, levels of	and cube numbers and the notation for squared (2) and cubed (3).	decimal place.	and estimate the area of irregular shapes.	Identify other multiples of 90°.				
rounding.	accuracy.	l loi squareu (2) anu cubeu (3).	Read, write, order and compare	of friegular shapes.	multiples of 90 .				
rounding.	accuracy.	Solve problems involving	numbers with up to three decimal	Estimate volume e.g.	Use the				
Read Roman	Solve	multiplication and division including	places.	using 1 cm³ blocks to	properties of				
numerals to 1000 (M)	addition and	using their knowledge of factors and		build cuboids	rectangles to				
and recognise years	subtraction	multiples, squares and cubes.	Solve problems involving number up to	(including cubes) and	deduce related				
written in Roman	multi-step		three decimal places.	capacity e.g. using	facts and find				
numerals.	problems in	Solve problems involving addition,		water.	missing lengths				
	contexts,	subtraction, multiplication and	Recognise the per cent symbol (%) and	Calva problema	and angles.				
	deciding which	meaning of equals sign.	understand that per cent relates to 'number of parts per hundred', and write	Solve problems involving converting	Distinguish				
	operations	Solve problems involving	percentages as a fraction with	between units of time.	between regular				
	and	multiplication and division, including	denominator 100, and as a decimal.	Settled it dille of tille.	and irregular				
	methods to	scaling by simple fractions and	,	Use all four operations	polygons based				
	use and	problems involving simple rates.	Solve problems which require knowing	to solve problems	on reasoning				
	why.		percentage and decimal equivalents of	involving measure e.g.	about equal				
			1/2, 1/4, 1/5, 2/5, 4/5 and those fractions	length, mass, volume,	sides and				
			with a denominator of a multiple of 10 or	money using decimal	angles.				
			25.	notation, including scaling.					

# **Mathematics Band 6**

Number and	Addition and	Multiplication and	Fractions	Measurement	Properties of	Position and	Statistics	Ratio and Proportion	Algebra
Place Value	Subtraction	Division			Shape	Direction		•	
Read, write,	Perform mental	Multiply multi-digit numbers	Use common factors to	Solve problems	Draw 2-D	Describe positions	Interpret and	Solve	Use simple
order and	calculations with	up to 4 digits by a two-digit	simplify fractions, use common	involving the	shapes using	on the full	construct pie	problems	formulae.
compare	mixed operations	whole number using the formal	multiples to express fractions	calculation and	given	coordinate grid (all	charts and	involving the	
numbers up to	to carry out	written method of long	in the same denomination.	conversion of units of	dimensions and	four quadrants).	line graphs	relative sizes	Generate
10 000 000 and	calculations	multiplication.		measure, using	angles.		and use	of two	and describe
determine the	involving the four		Compare and order fractions,	decimal notation up to		Draw and translate	these to	quantities	linear
value of each	operations.	Divide numbers up to 4 digits	including fractions > 1.	three decimal places	Recognise,	simple shape on	solve	where missing	number
digit.		by two-digit whole number		where appropriate.	describe and	the coordinate	problems.	values can be	sequences.
	Solve multi-step	using the formal written	Add and subtract fractions with		build simple 3-D	plane and reflect		found by using	_
Round any	problems in	method of long division and	different denominations and	Use, read, write and	shapes,	them in the axis.	Calculate	integer	Express
whole number to	contexts, deciding	interpret remainder as whole	mixed numbers, using the	convert between	including making		and interpret	multiplication	missing
a required	which operations	number remainders, fractions,	concept of equivalent	standard units,	nets.		the means	and division	number
degree of	and methods to	or by rounding as appropriate	fractions.	converting			as an	facts.	problems
accuracy.	use and why.	for the context.		measurements of	Compare and		average		algebraically
		B	Multiply simple pairs of proper	length, mass, volume	classify			Solve	•
Use negative	Solve problems	Divide numbers up to 4 digits	fractions, writing the answer in	and time from a	geometric			problems	
numbers in	involving addition	by two-digit number using the	its simplest form e.g. 1/4 x 1/2 =	smaller unit of	shapes based			involving the	Find pairs of
context and	and subtraction.	formal written method of short	1/8.	measure to a larger	on their			calculation of	numbers
calculate		division where appropriate,	<b>5</b>	unit and vice versa,	properties and			percentages	that satisfy
intervals across	Use estimation to	interpreting remainders	Divide proper fractions by	using decimal notation	sizes and find			e.g. on	an equation
zero.	check answers to	according to the context.	whole numbers e.g. $\frac{1}{3} \div 2 =$	to up to three decimal	unknown angles			measures and	with two
0.1	calculations and		1/6.	places.	in any triangles,			such as 15%	unknowns.
Solve number	determine, in the	Perform mental calculations,			quadrilaterals			of 360 and the	
and practical	context of a	including with missed	Associate a fraction with	Convert between	and regular			use of	Enumerate
problems that	problem, an	operations and large numbers.	division and calculate decimal	miles and kilometres.	polygons.			percentages	possibilities
involve ordering	appropriate	Literation and the state of	fraction equivalents e.g. 0.375	December that	Illinotes to an al			as	of
and comparing	degree of	Identify common factors,	for a simple fraction e.g. 3/6.	Recognise that	Illustrate and			comparison.	combination
numbers to 10	accuracy.	common multiples and prime	I densify the control of each digit	shapes with the same	name parts of			Calua	s of two
000 000,		numbers.	Identify the value of each digit	areas can have	circles including			Solve	variables.
rounding to a		Lloo big/box/knowledge of the	in numbers given to three	different perimeters	radius, diameter			problems	
required degree		Use his/her knowledge of the	decimal places and multiply	and vice versa.	and circumference			involving	
of accuracy, using negative		order of operations to carry out calculations involving the four	and divide numbers by 10, 100 and 1000 giving answers up to	Recognise when it is	and know that			similar shapes where the	
numbers and			three decimal places.	possible to use	the diameter is			scale factor is	
		operations.	three decimal places.	formulae for area and				known or can	
calculating intervals across		Solve addition and subtraction	Multiply one-digit numbers	volume of shapes.	twice the radius.			be found.	
zero.		multi-step problems in	with up to two decimal places	volume of snapes.	Recognise			be lourid.	
Zeio.		contexts, deciding which	by whole numbers.	Calculate the area of	angles where			Solve	
		operations and methods to	by whole numbers.	parallelograms and	they meet at a			problems	
		use and why.	Use written division methods	triangles.	point, are on a			involving	
		use and why.	in cases where the answer	triarigles.	straight line, or			unequal	
		Solve problems involving	has up to two decimal places.	Calculate, estimate	are vertically			sharing and	
		addition, subtractions,	has up to two decimal places.	and compare volume	opposite and			grouping using	
		multiplication and division.	Solve problems which require	of cubes and cuboids	find missing			knowledge of	
		multiplication and division.	answers to be rounded to	using standard units,	angles.			fractions and	
		Use estimation to check	specific degrees of accuracy.	including cubic	angics.			multiples	
		answers to calculations and	specific degrees of accuracy.	centimetres (cm³) and				munipica	
		determine, in the context of a	Recall and use equivalences	cubic metres (m³) and					
		problem, an appropriate	between simple fractions,	extending to other					
		degree of accuracy.	decimals and percentages,	units e.g. mm <sup>3</sup> and					
		acgioo oi accaracy.	including different contexts.	km <sup>3</sup> .					
			morading different contexts.	1811 .	ĺ			l	1

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