Skills Progression in Maths - St Mary's CE Primary School

Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Counting	Counting	Counting	Counting	Counting	Counting	Counting
Number	Have a deep	Count to and	Count in steps of	Count from 0 in	Count backwards	Interpret negative	Use negative
	understanding of	across 100,	2, 3, and 5 from 0,	multiples of 4, 8,	through zero to	numbers in	numbers in
Place Value	numbers to 10,	forwards and	and in tens from	50 and 100;	include negative	context, count	context, and
	including the	backwards,	any number,		numbers	forwards and	calculate intervals
	composition of	beginning with 0	forward or	Find 10 or 100		backwards with	across zero
	each number.	or 1, or from any	backward	more or less than	Count in multiples	positive and	
	Subitise to 5.	given number		a given number	of 6, 7, 9, 25 and	negative whole	Comparing
	Verbally count to		Comparing		1000	numbers,	Read, write, order
	20, recognizing	Count, read and	Compare and	Comparing		including through	and compare
	the pattern of the	write numbers to	order numbers	Compare and	Find 1000 more	zero	numbers up to 10
	counting system.	100 in numerals;	from 0 up to 100;	order numbers up	or less than a		000 000 and
		count in multiples	use and = signs	to 1000	given number	Count forwards or	determine the
	Comparing	of twos, fives and				backwards in	value of each digit
	Compare	tens	Identifying.		Comparing	steps of powers	(Objective also
	quantities up to		Representing and	Identifying.	Order and	of 10 for any	shown in Reading
	10 in different	Identify one more	Estimating	Representing and	compare numbers	given number up	and Writing
	contexts,	and one less of a	<u>Numbers</u>	Estimating	beyond 1000	to 1000 000	Numbers)
	recognizing when	given number	Identify,	<u>Numbers</u>			
	one quantity is		represent and	Identify,	Compare	Comparing	
	greater than, less	Comparing	estimate numbers	represent and	numbers with the	Read, write, order	Reading and
	than or the same	Use the language	using different	estimate numbers	same number of	and compare	Writing Numbers
	as the other	of: equal to, more	representations,	using different	decimal places up	numbers to at	R ead, write, order
	quantity	than, less than	including the	representations	to two decimal	least 1 000 000	and compare
		(fewer), most,	number line		places (Fractions	and determine	numbers up to 10
	<u>Identifying.</u>	least			NC Objective)	the value of each	000 000 and
	Representing and		Reading and	Reading and		digit (Objective	determine the
	Estimating	Identifying.	Writing Numbers	Writing Numbers	Identifying.	also shown in	value of each digit
	<u>Numbers</u>	Representing and	Read and write	Read and write	Representing and	Reading and	(appears also in
			numbers to at	numbers up to 1		Writing Numbers)	

Identify an	d <u>Estimating</u>	least 100 in	000 in numerals	Estimating		Understanding
represent	<u>Numbers</u>	numerals and in	and in words	<u>Numbers</u>		Place Value)
numbers w	vith Identify and	words		Identify,		
objects and	d represent		Tell and write the	represent and	Reading and	
pictorial	numbers using	<u>Understanding</u>	time from an	estimate numbers	Writing Numbers	
representa	ations objects and	Place Value	analogue clock,	using different	Read, write, order	Understanding
including	pictorial	Recognise the	including using	representations	and compare	Place Value
introduction	on to a representations	place value of	Roman numerals		numbers to at	Read, write, order
number lir	ne. including the	each digit in a	from I to XII, and	Reading and	least 1 000 000	and compare
	number line	two-digit number-	12-hour and 24-	Writing Numbers	and determine	numbers up to 10
Reading a	<u>nd</u>	non-statutory	hour clocks	Read Roman	the value of each	000 000 and
Writing Nu	umbers Reading and	(tens, ones)	(Measurement NC	numerals to 100	digit (appears also	determine the
Practise re	ading Writing Number	<u>'S</u>	Objective)	(I to C) and know	in Comparing	value of each digit
and writing	g Read and write			that over time,	Numbers	(appears also in
numbers f	rom 1 numbers from 1			the numeral		Reading and
to 10 in nu	merals to 20 in numera	S	<u>Understanding</u>	system changed	Read Roman	Writing Numbers)
and words	. and words.		<u>Place Value</u>	to include the	numerals to 1 000	
			Recognise the	concept of zero	(M) and recognise	Identify the value
<u>Understan</u>	<u>Understanding</u>		place value of	and place value.	years written in	of each digit to
Place Valu			each digit in a		Roman numerals.	three decimal
Have a dee	ep Recognise the		three-digit			places and
understan	9 1		number	<u>Understanding</u>		multiply and
numbers to	,		(hundreds, tens,	<u>Place Value</u>	<u>Understanding</u>	divide numbers
including t	he numbers 1-20		and ones)	Recognise the	<u>Place Value</u>	by 10, 100 and
composition	' ' ' '	S		place value of	Read, write, order	1000 where the
each numb				each digit in a	and compare	answers are up to
Verbally co	ount until Year 2 but	as		four-digit number	numbers to at	three decimal
beyond 20	· I	2		(thousands,	least 1 000 000	places (Fractions
recognizin	~ I			hundreds, tens,	and determine	NC Objective)
pattern of	the to be necessary	in		and ones)	the value of each	
counting s	ystem. this year group t	0			digit (appears also	Rounding
	support			Find the effect of	in Reading and	Round any whole
	conceptual			dividing a one or	Writing Numbers)	number to a
	understanding,			two-digit number		required degree
	fluency and			by 10 and 100,		of accuracy

progression in		identifying the	Recognise and	
this domain)		value of the digits	use thousandths	Solve problems
,		in the answer as	and relate them	which require
		units, tenths and	to tenths,	answers to be
		hundredths	hundredths and	rounded to
		(Fractions NC	decimal	specified degrees
		Objective)	equivalents	of accuracy
			(Fractions NC	(Fractions NC
		Rounding	Objective)	Objective)
		Round any		
		number to the	Rounding	
		nearest 10, 100 or	Round any	
		1 000	number up to 1	
			000 000 to the	
		Round decimals	nearest 10, 100, 1	
		with one decimal	000, 10 000 and	
		place to the	100 000	
		nearest whole		
		number	Round decimals	
		(Fractions NC	with two decimal	
		Objective)	places to the	
			nearest whole	
			number and to	
			one decimal place	
			(Fractions NC	
			Objective)	

Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Number Bonds	Number Bonds	Number Bonds				
Number	Automatically	Represent and	Recall and use				
	recall (without	use number	addition and				
<u>Addition</u>	reference to	bonds and related	subtraction facts				
and	rhymes, counting	subtraction facts	to 20 fluently, and				
	or other aids)	within 20	derive and use				
<u>Subtraction</u>	number bonds up		related facts up to				
	to 5 (including	<u>Mental</u>	100	<u>Mental</u>		<u>Mental</u>	<u>Mental</u>
	subtraction facts)	<u>Calculation</u>		<u>Calculation</u>		<u>Calculation</u>	<u>Calculation</u>
	and some	Add and subtract	<u>Mental</u>	Add and subtract		Add and subtract	Perform mental
	numbers bonds to	one-digit and two	<u>Calculation</u>	numbers		numbers mentally	calculations,
	10 including	digit numbers to	add and subtract	mentally,		with increasingly	including with
	double facts.	20, including zero	numbers using	including: 1. a		large numbers	mixed operations
			concrete objects,	three-digit			and large
	Begin to	Read, write and	pictorial	number and ones			numbers
	understand the	interpret	representations,	2. a three-digit			
	operations of	mathematical	and mentally,	number and tens			Use their
	addition and	statements	including: * a	3. a three-digit			knowledge of the
	subtraction and	involving addition	two-digit number	number and			order of
	use associated	(+), subtraction (-)	and ones * a two-	hundreds			operations to
	vocabulary. Begin	and equals (=)	digit number and				carry out
	to understand	signs (appears	tens * two two-				calculations
	mathematical	also in Written	digit numbers				involving the four
	symbols	Methods)	adding three one				operations
	associated with		digit numbers				
	addition and	Written Methods					
	subtraction.	Read, write and	Show that	Written Methods	Written Methods	Written Methods	
		interpret	addition of two	Add and subtract	Add and subtract	Add and subtract	
	<u>Mental</u>	mathematical	numbers can be	numbers with up	numbers with up	whole numbers	
	<u>Calculation</u>	statements	done in any order	to three digits,	to 4 digits using	with more than 4	
	Subitise up to 5	involving addition	(commutative)	using formal	the formal	digits, including	
	Automatically	(+), subtraction (-)	and subtraction of	written methods	written methods	using formal	
	recallnumber	and equals (=)	one number from	of columnar	of columnar	written methods	
	bonds up to	signs (Objective	another cannot		addition and	(columnar	

5and	1	also shown in	lavaraa	addition and	subtraction where	addition and	ſ
			<u>Inverse</u>				
			Operations,	subtraction	appropriate	subtraction)	
	•	Calculation)	Estimating and				
double			Checking				
	· ·		<u>Answers</u>	<u>Inverse</u>	<u>Inverse</u>	<u>Inverse</u>	
		-	Estimate the	Operations,	Operations,	Operations,	
To bec	-	Estimating and	answer to a	Estimating and	Estimating and	Estimating and	
familia	ar with and C	Checking	calculation and	Checking	Checking	Checking	
unders	stand <u>A</u>	<u>Answers</u>	use inverse	<u>Answers</u>	<u>Answers</u>	<u>Answers</u>	
mathe	ematical R	Recognise and	operations to	Estimate and use	Use rounding to	Use estimation to	
symbo	ols linked to u	use the inverse	check answers	inverse	check answers to	check answers to	
additio	on and re	elationship		operations to	calculations and	calculations and	
subtra	ction. To b	petween addition		check answers to	determine, in the	determine, in the	
begin t	to a	and subtraction		a calculation	context of a	context of a	
repres		and use this to			problem, levels of	problem, levels of	
		check calculations			accuracy	accuracy.	
senten	nces with a	and solve missing			,	,	
approp		number problems					
symbo		'					
,							
Skills EYFS	Y	/ear 1	Year 2	Year 3	Year 4	Year 5	Year 6

<u>Number</u>
Multiplication
and Division

Multiplication and Division Facts

Explore and represent patterns within numbers up to 10, including evens and odds. double facts and how quantities can be distributed equally

Mental Calculation

Automatically recall ...number bonds up to 5...and some number bonds to 10 including double facts

Written Calculation

Begin to represent mathematical statements with appropriate symbols

Multiplication and Division Facts

Count in multiples of twos, fives and tens (Number: Place Value NC Objective)

Mental Calculation

Solve one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher (Objective also shown in Problem Solving)

Multiplication and Division Facts

Count in steps of 2. 3. and 5 from 0. and in tens from any number, forward or backward (Number: Place Value NC Objective)

Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers

Mental Calculation

Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot

Multiplication and Division Facts Count from 0 in

multiples of 4.8. 50 and 100 (Number: Place Value NC Objective)

Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables

Mental Calculation

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

Multiplication and Division Facts Count in multiples

of 6, 7, 9, 25 and 1 000 (Number: Place Value NC Objective)

Recall multiplication and division facts for multiplication tables up to 12 × 12 (MTC point)

Mental

Calculation

known and

multiply and

including:

numbers

and

mental

Use place value,

derived facts to

divide mentally,

multiplying by 0

1; multiplying

together three

Recognise and

use factor pairs

commutativity in

and 1; dividing by

Mental Calculation

Multiply and divide numbers mentally drawing upon known facts Multiply and

divide whole numbers and those involving decimals by 10, 100 and 1000

Written Calculation

Multiply numbers up to 4 digits by a one- or two-digit

Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000

Multiplication

and Division Facts

(Number: Place Value NC Objective)

Mental Calculation

Perform mental calculations, including with mixed operations and large numbers

Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8)

	(Objective also	calculations	number using a	(Fractions NC
Written	shown in Written	(Objective also	formal written	Objective)
Calculation	Methods)	shown in in	method, including	
Calculate	•	Properties of	long	Written
mathematical	Written	Numbers)	multiplication for	Calculation
statements for	<u>Calculation</u>		two-digit	Multiply multi-
multiplication and	Write and	<u>Written</u>	numbers	digit numbers up
division within	calculate	<u>Calculation</u>		to 4 digits by a
the multiplication	mathematical	Multiply two-digit	Divide numbers	two-digit whole
tables and write	statements for	and three-digit	up to 4 digits by a	number using the
them using the	multiplication and	numbers by a one	one-digit number	formal written
multiplication (x),	division using the	digit number	using the formal	method of long
division (÷) and	multiplication	using formal	written method	multiplication
equals (=) signs	tables that they	written layout	of short division	
	know, including		and interpret	Divide numbers
	for two-digit	Divide numbers	remainders	up to 4- digits by
	numbers times	up to 3 digits by a	appropriately for	a two-digit whole
	one-digit	one-digit number	the context	number using the
	numbers, using	using the formal		formal written
	mental and	written method of	PROPERTIES OF	method of short
	progressing to	short division	NUMBERS:	division where
	formal written	including those	MULTIPLES,	appropriate for
	methods	with a remainder	FACTORS,	the context divide
	(Objective also	written as 'r'	PRIMES, SQUARE	numbers up to 4
	shown in Mental	(This is not	AND CUBE	digits by a two-
	Methods)	statutory until	<u>NUMBERS</u>	digit whole
		Year 5 but as a	Identify multiples	number using the
	INVERSE	school we have	and factors,	formal written
	OPERATIONS,	decided this step	including finding	method of long
	ESTIMATING AND	to be necessary	all factor pairs of	division, and
	CHECKING	for some in this	a number, and	interpret
	ANSWERS	year group to	common factors	remainders as
	Estimate the	support	of two numbers.	whole number
	answer to a	progression in this		remainders,
	calculation and			fractions, or by

	<u> </u>				
		use inverse	area through Y5	Know and use the	rounding, as
		operations to	and Y6)	vocabulary of	appropriate for
		check answers		prime numbers,	the context
		(Addition &	PROPERTIES OF	prime factors and	
		Subtraction NC	NUMBERS:	composite (non-	Use written
		Objective)	MULTIPLES,	prime) numbers	division methods
		estimate and use	FACTORS,		in cases where
		inverse	PRIMES, SQUARE	Establish whether	the answer has up
		operations to	AND CUBE	a number up to	to two decimal
		check answers to	NUMBERS	100 is prime and	places (Fractions:
		a calculation	Recognise and	recall prime	using decimals NC
		(Addition &	use factor pairs	numbers up to 19	Objective)
		Subtraction NC	and		
		Objective)	commutativity in	Recognise and	
			mental	use square	PROPERTIES OF
			calculations	numbers and	NUMBERS:
			(Objective also	cube numbers,	MULTIPLES,
			shown in Mental	and the notation	FACTORS,
			Calculation)	for squared (2)	PRIMES,
				and cubed (3)	SQUARE AND
			INVERSE		CUBE NUMBERS
			OPERATIONS,		Identify common
			ESTIMATING AND		factors, common
			CHECKING		multiples and
			ANSWERS		prime numbers
			Estimate and use		use common
			inverse		factors to simplify
			operations to		fractions; use
			check answers to		common
			a calculation		multiples to
			(Addition &		express fractions
			Subtraction NC		in the same
			Objective)		denomination
			,,		(Fractions NC
					Objective)
			1		

		,	
			Calculate,
			estimate and
			compare volume
			of cubes and
			cuboids using
			standard units,
			including
			centimetre cubed
			(cm 3) and cubic
			metres (m 3),
			and extending to
			other units such
			as mm 3 and km 3
			(Measures NC
			Objective)
			ORDER OF
			<u>OPERATIONS</u>
			Use their
			knowledge of the
			order of
			operations to
			carry out
			calculations
			involving the four
			operation
			<u>INVERSE</u>
			OPERATIONS,
			ESTIMATING AND
			<u>CHECKING</u>
			ANSWERS Use
			estimation to

			check answers to calculations and determine, in the context of a problem, levels of accuracy

Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Counting in	Counting in	Counting in	Counting in	Counting in		
Number	Fractional Steps	Fractional Steps	Fractional Steps	Fractional Steps	Fractional Steps		
	Beginning to use		Pupils should	Count up and	Count up and		
Fractions,	the term "half"	Recognising	count in fractions	down in tenths	down in	Recognising	
Decimals	and understand it	<u>Fractions</u>	up to 10, starting		hundredths	<u>Fractions</u>	
	means sharing	Recognise, find	from any number	Recognising		Recognise and	
<u>and</u>	into 2 equal parts	and name a half	and using the 1/	<u>Fractions</u>	Recognising	use thousandths	
Percentages		as one of two	2 and 2 / 4	Recognise, find	<u>Fractions</u>	and relate them	
		equal parts of an	equivalence on	and write	Recognise that	to tenths,	
		object, shape or	the number line	fractions of a	hundredths arise	hundredths and	
		quantity	(Non-Statutory	discrete set of	when dividing an	decimal	
			Guidance)	objects: unit	object by one	equivalents	
		Recognise, find		fractions and non-	hundred and	(Objective also	
		and name a	Recognising	unit fractions with	dividing tenths by	shown in	
		quarter as one of	<u>Fractions</u>	small	ten	Equivalence)	
		four equal parts	Recognise, find,	denominators			Comparing
		of an object,	name and write			Comparing	<u>fractions</u>
		shape or quantity	fractions 1 / 3 , 1	Recognise that		fractions	Compare and
			/4,2/4 and 3/	tenths arise from		Compare and	order fractions,
			4 of a length,	dividing an object		order fractions	including
			shape, set of	into 10 equal		whose	fractions >1
			objects or	parts and in		denominators are	
			quantity	dividing one –		all multiples of	
				digit numbers or		the same number	
				quantities by 10.			
						Comparing	Comparing
				Recognise and		<u>Decimals</u>	<u>Decimals</u>
				use fractions as	Comparing	Read, write, order	Identify the value
				numbers: unit	<u>Decimals</u>	and compare	of each digit in
				fractions and non-	Compare	numbers with up	numbers given to
				unit fractions with	numbers with the	to three decimal	three decimal
				small	same number of	places	places
				denominators	decimal places up		

	EQUIVALENCE INCLUDING DECIMALS, FRACTIONS AND PERCENTAGES Write simple fractions e.g. 1 / 2	Comparing fractions Compare and order unit fractions, and fractions with the same denominators EQUIVALENCE INCLUDING DECIMALS, FRACTIONS AND PERCENTAGES Recognise and show, using	Rounding Including Decimals Round decimals with one decimal place to the nearest whole number EQUIVALENCE INCLUDING DECIMALS, FRACTIONS AND PERCENTAGES Recognise and show, using	Rounding Including Decimals Round decimals with two decimal places to the nearest whole number and to one decimal place EQUIVALENCE INCLUDING DECIMALS, FRACTIONS AND PERCENTAGES Identify, name and write	Rounding Including Decimals Solve problems which require answers to be rounded to specified degrees of accuracy EQUIVALENCE INCLUDING DECIMALS, FRACTIONS AND PERCENTAGES Use common factors to simplify
				EQUIVALENCE	EQUIVALENCE
					-
	Write simple	Recognise and	Recognise and	Identify, name	Use common
	•				
	of 6 = 3 and	diagrams,	diagrams, families	equivalent	fractions; use
	recognise the equivalence of 2 /	equivalent fractions with	of common equivalent	fractions of a given fraction,	common multiples to
	4 and 1 / 2.	small	fractions	represented	express fractions
	,	denominator		visually, including	in the same
1			Recognise and	tenths and	denomination
			write decimal	hundredths	
					Associate a fraction with

		number of tenths or hundredths	Read and write decimal numbers as fractions (e.g. 0.71 = 71 / 100)	division and calculate decimal fraction
		Recognise and write decimal	0.71 - 71 / 100 /	equivalents (e.g. 0.375) for a
		equivalents to	Recognise and	simple fraction
		1/4;1/2;3/4	use thousandths and relate them	(e.g. 3 / 8)
			to tenths, hundredths and	Recall and use equivalences
			decimal	between simple
			equivalents	fractions, decimals and
			Recognise the per	percentages,
			cent symbol (%)	including in
			and understand	different
			that per cent	contexts.
			relates to	
			"number of parts	
			per hundred",	
			and write	
			percentages as a fraction with	
			denominator 100	
			as a decimal	
			fraction	
			Haction	
	Addition and	Addition and	Addition and	Addition and
	Subtraction of	Subtraction of	Subtraction of	Subtraction of
	<u>Fractions</u>	<u>Fractions</u>	<u>Fractions</u>	<u>Fractions</u>
	Add and subtract	Add and subtract	Add and subtract	Add and subtract
	fractions with the	fractions with the	fractions with the	fractions with
	same	same	same	different
	denominator	denominator	denominator and	denominators
	within one whole			and mixed

		(e.g. 5/7+1/7 = 6/7)	multiples of the same number 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 1 / 5) Multiplication and Division of Fractions Multiply proper fractions and mixed numbers by whole	numbers, using the concept of equivalent fractions Multiplication and Division of Fractions Multiply simple pairs of proper fractions, writing the answer in its
			a mixed number (e.g. 2 / 5 + 4 / 5 =	
			<u>Multiplication</u>	
			Fractions Multiply proper fractions and	Fractions Multiply simple pairs of proper
			by whole numbers,	the answer in its simplest form
			supported by materials and diagrams	(e.g. 1/4×1/2 = 1/8)
				Divide proper fractions by whole numbers
				(e.g. 1/3÷2=1/6)

		Multiplication and Division of Decimals 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	Multiplication and Division of Decimals Multiply one-digit numbers with up to two decimal places by whole numbers Multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
			Associate a fraction with division and calculate decimal fraction equivalents (e.g.

			0.375) for a simple fraction (e.g. 3 /8) Use written division methods in cases where the answer has up to two decimal places

Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
							Solve problems
Number							involving the
<u>Number</u>							relative sizes of two
Ratio and							quantities where
							missing values can
Proportion							be found by using
							integer
Ratio and							multiplication and division facts
Proportion Proportion Proportion							uivision facts
objectives only							Solve problems
appear in Year 6.							involving the
However, it is							calculation of
vital that these							percentages [for
objectives build							example, of
upon children's							measures, and such
prior learning in							as 15% of 360] and
other							the use of
mathematical							percentages for comparison
concepts, in							Companison
particular:							Solve problems
fractions,							involving similar
decimals and							shapes where the
percentages.							scale factor is
Therefore, this							known or can be
document should							found
be used in							Calva problems
conjunction with							Solve problems involving unequal
the other							sharing and
progression							grouping using
documents in							knowledge of
order to see							fractions and
where this							multiples.
learning is							
progressing from)							

Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number Algebra	Equations Have a deep understanding of numbers to 10, including the composition of each number Automatically recall number bonds to 5 and some number bonds to 10 including double facts. Explore and represent patterns within numbers to 10, including evens and odds, double facts and how quantities can be distributed equally Continue, copy and create repeating patterns Identifying missing numbers	Equations Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = * - 9 (Addition and Subtraction NC Objective) Represent and use number bonds and related subtraction facts within 20 (Addition and Subtraction NC Objective)	Equations Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. (Addition and Subtraction NC Objective) Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 (Addition and Subtraction NC Objective)	Equations Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. (Addition and Subtraction NC Objective) solve problems, including missing number problems, involving multiplication and division, including integer scaling (Multiplication & Division NC Objective)	Formulae Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit. (Link to Measurement NC Objective)	Equations Use the properties of rectangles to deduce related facts and find missing lengths and angles (Geometry: Properties of Shapes NC Objective)	Equations Express missing number problems algebraically Find pairs of numbers that satisfy number sentences involving two unknowns Enumerate all possibilities of combinations of two variables Formulae Use simple formulae Recognise when it is possible to use formulae for area and volume of shapes (Measurement NC Objective)

from number	Sequences	Sequences		<u>Sequences</u>
lines up to 10	Sequence events	Compare and		Generate and
	in chronological	sequence		describe linear
	order using	intervals of time		number
	language such as:	(Measurement NC		sequences
	before and after,	Objective)		
	next, first, today,			
	yesterday,	Order and		
	tomorrow,	arrange		
	morning,	combinations of		
	afternoon and	mathematical		
	evening	objects in		
	(Measurement NC	patterns		
	Objective)	(Geometry:		
		position and		
		direction NC		
		Objective)		

Skills	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Comparing and	Comparing and	Comparing and	Comparing and	Comparing and	Comparing and	Comparing and
Measurement	Estimating	Estimating	Estimating	Estimating	Estimating	Estimating	Estimating
	Compare length,	Compare,	Compare and	Compare	Estimate,	Calculate and	Calculate,
NB. THERE IS NO	weight and	describe and	order lengths,	durations of	compare and	compare the area	estimate and
ELG RELATED TO	capacity	solve practical	mass,	events, for	calculate different	of squares and	compare volume
<u>SSM</u>		problems for:	volume/capacity	example to	measures,	rectangles	of cubes and
	Use prior	* lengths and	and record the	calculate the time	including money	including using	cuboids using
	vocabulary and	heights [e.g.	results using >, <	taken by	in pounds and	standard units,	standard units,
	supplement with	long/short,	and =	particular events	pence	square	including
	Lightest/heaviest/	longer/shorter,		or tasks estimate	(Also shown in	centimetres	centimetre cubed
	Tallest/shortest/	tall/short,	Compare and	and read time	Measuring)	(cm 2) and	(cm 3) and cubic
	Half full/quickest/	double/half] *	sequence	with increasing		square metres	metres (m 3),
	Slowest To	mass/weight [e.g.	intervals of time	accuracy to the	Measuring and	(m 2) and	and extending to
	compare,	heavy/light,		nearest minute;	<u>Calculating</u>	estimate the area	other units such
	describe and	heavier than,	Measuring and	record and	Estimate,	of irregular	as mm 3 and km 3
	solve practical	lighter than] *	<u>Calculating</u>	compare time in	compare and	shapes	
	problems for	capacity and	Choose and use	terms of seconds,	calculate different	(Also shown in	Measuring and
	>length and	volume [e.g.	appropriate	minutes, hours	measures,	Measuring)	<u>Calculating</u>
	heights. >weight	full/empty, more	standard units to	and o'clock; use	including money		Solve problems
	>capacity >time	than, less than,	estimate and	vocabulary such	in pounds and	Estimate volume	involving the
		half, half full,	measure	as a.m./p.m.,	pence (Also	(e.g. using 1 cm 3	calculation and
	To order and	quarter] * time	length/height in	morning,	shown in	blocks to build	conversion of
	sequence 3	[e.g. quicker,	any direction	afternoon, noon	Comparing)	cubes and	units of measure,
	comparisons of	slower, earlier,	(m/cm); mass	and midnight		cuboids) and	using decimal
	measure.	later]	(kg/g);	(Also shown in	Measure and	capacity (e.g.	notation up to
			temperature (°C);	Telling the Time)	calculate the	using water)	three decimal
		Sequence events	capacity		perimeter of a		places where
	Measuring and	in chronological	(litres/ml) to the	Measuring and	rectilinear figure	Measuring and	appropriate
	<u>Calculating</u>	order using	nearest	<u>Calculating</u>	(including	<u>Calculating</u>	(Also shown in
	Begin to use non	language [e.g.	appropriate unit,	Measure,	squares) in	Use all four	Converting)
	-standard units to	before and after,	using rulers,	compare, add and	centimetres and	operations to	
	measure static	next, first, today,	scales,	subtract: lengths	metres	solve problems	Recognise that
	objects. To record	yesterday,	thermometers	(m/cm/mm);		involving measure	shapes with the
	findings during	tomorrow,		mass (kg/g);		(e.g. length, mass,	same areas can

in a diameter . To			.1/	E' dub f	-1	le e defference
investigations. To	morning,	and measuring	volume/capacity	Find the area of	volume, money)	have different
understand the	afternoon and	vessels	(l/ml)	rectilinear shapes	using decimal	perimeters and
importance of	evening]			by counting	notation including	vice versa
constant baseline		Recognise and	Measure the	squares	scaling.	
	Measuring and	use symbols for	perimeter of			Calculate the area
<u>Telling The Time</u>	<u>Calculating</u>	pounds (£) and	simple 2-D shapes	Telling The Time	Measure and	of parallelograms
Sequence a	Measure and	pence (p);		Read, write and	calculate the	and triangles
familiar set of	begin to record	combine amounts	Add and subtract	convert time	perimeter of	
events both	the following: *	to make a	amounts of	between	composite	Calculate,
fictional and	lengths and	particular value	money to give	analogue and	rectilinear shapes	estimate and
nonfictional	heights *		change, using	digital 12 and 24-	in centimetres	compare volume
	mass/weight *	Find different	both £ and p in	hour clocks (Also	and metres	of cubes and
Be introduced to	capacity and	combinations of	practical contexts	shown in		cuboids using
and understand	volume * time	coins that equal		Converting)	Calculate and	standard units,
the o'clock time	(hours, minutes,	the same	Telling The Time		compare the area	including cubic
on an analogue	seconds)	amounts of	Tell and write the	Solve problems	of squares and	centimetres (cm 3
clock.		money	time from an	involving	rectangles) and cubic
	Recognise and		analogue clock,	converting from	including using	metres (m 3),
Be able to read	know the value of	Solve simple	including using	hours to minutes;	standard units,	and extending to
and draw the	different	problems in a	Roman numerals	minutes to	square	other units [e.g.
hands on a clock	denominations of	practical context	from I to XII, and	seconds; years to	centimetres	mm 3 and km 3].
face to show	coins and notes	involving addition	12-hour and 24-	months; weeks to	(cm 2) and	
times.		and subtraction of	hour clocks	days (Also shown	square metres	Recognise when it
	Telling The Time	money of the		in Converting)	(m 2) and	is possible to use
	Tell the time to	same unit,	Estimate and read		estimate the area	formulae for area
	the hour and half	including giving	time with	Converting	of irregular	and volume of
	past the hour and	change	increasing	Convert between	shapes	shapes
	draw the hands	-	accuracy to the	different units of		
	on a clock face to	Telling The Time	nearest minute;	measure (e.g.	Recognise and	
	show these times.	Tell and write the	record and	kilometre to	use square	Converting
		time to five	compare time in	metre; hour to	numbers and	Use, read, write
	Recognise and	minutes,	terms of seconds,	minute)	cube numbers,	and convert
	use language	including quarter	minutes, hours	·	and the notation	between standard
	relating to dates,	past/to the hour	and o'clock; use	Read, write and	for squared (2)	units, converting
	including days of	and draw the	vocabulary such	convert time	and cubed (3)	measurements of

the week, weeks,	hands on a clock	as a.m./p.m.,	between	(Multiplication	length, mass,
months and years	face to show	morning,	analogue and	and Division NC	volume and time
	these times.	afternoon, noon	digital 12 and 24-	Objective)	from a smaller
		and midnight	hour clocks	Telling The Time	unit of measure
	Know the number	(Also shown in	(Objective also	Solve problems	to a larger unit,
	of minutes in an	Comparing and	shown in in	involving	and vice versa,
	hour and the	Estimating)	Telling the Time)	converting	using decimal
	number of hours			between units of	notation to up to
	in a day.	Converting	Solve problems	time	three decimal
	(Objective also	Know the number	involving	Converting	places
	shown in	of seconds in a	converting from	Convert between	
	Converting)	minute and the	hours to minutes;	different units of	Solve problems
		number of days in	minutes to	metric measure	involving the
	Converting	each month, year	seconds; years to	(e.g. kilometre	calculation and
	Know the number	and leap year	months; weeks to	and metre;	conversion of
	of minutes in an		days (Also shown	centimetre and	units of measure,
	hour and the		in Telling the	metre; centimetre	using decimal
	number of hours		Time)	and millimetre;	notation up to
	in a day.			gram and	three decimal
	(Objective also			kilogram; litre and	places where
	shown in Telling			millilitre)	appropriate (Also
	the Time)				shown in
				Solve problems	Measuring and
				involving	Calculating)
				converting	Calculating
				between units of	Convert between
				time	miles and
				unie	kilometres
				Understand and	Kilolileties
				use equivalences	
				between metric	
				units and	
				common imperial	
				units ie. inches,	
				pounds and pints	

Skills	EYFS/Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<u>Identifying</u>	<u>Identifying</u>	Identifying	Drawing and	<u>Identifying</u>	Identifying	Identifying
Geometry	Shapes and Their	Shapes and Their	Shapes and Their	Construction	Shapes and Their	Shapes and Their	Shapes and Their
deometry	<u>Properties</u>	<u>Properties</u>	<u>Properties</u>	Draw 2-D shapes	<u>Properties</u>	<u>Properties</u>	<u>Properties</u>
·	Select, rotate and	Recognise and	Identify and	and make 3-D	Identify lines of	Identify 3-D	Recognise,
There is no ELG	manipulate	name common	describe the	shapes using	symmetry in 2-D	shapes, including	describe and build
for SSM	shapes in order to	2- D and 3-D	properties of 2-D	modelling	shapes presented	cubes and other	simple 3-D
	develop spatial	shapes, including:	shapes, including	materials;	in different	cuboids, from	shapes, including
	reasoning skills	* 2-D shapes [e.g.	the number of	recognise 3-D	orientations	2- D	making nets
		rectangles	sides and line	shapes in		representations	(appears also in
	Compose and	(including	symmetry in a	different	Drawing and		Drawing and
	decompose	squares), circles	vertical line	orientations and	Construction	Drawing and	Constructing)
	shapes so that	and triangles] * 3-		describe them	Complete a	Construction	
	children recognise	D shapes [e.g.	Identify and		simple symmetric	Draw given	Illustrate and
	a shape can have	cuboids (including	describe the	<u>Angles</u>	figure with	angles, and	name parts of
	other shapes	cubes), pyramids	properties of 3-D	Recognise angles	respect to a	measure them in	circles, including
	within it, just as	and spheres].	shapes, including	as a property of	specific line of	degrees	radius, diameter
	numbers can.		the number of	shape or a	symmetry		and
		Position,	edges, vertices	description of a		Comparing and	circumference
	Recognise and	Direction and	and faces	turn	Comparing and	Classifying	and know that
	name common 2d	<u>Movement</u>			Classifying	Use the	the diameter is
	and 3d shapes	Describe position,	Identify 2-D	Identify right	Compare and	properties of	twice the radius
	and talk about	direction and	shapes on the	angles, recognise	classify geometric	rectangles to	
	properties of	movement,	surface of 3-D	that two right	shapes, including	deduce related	
	sides, corners,	including half,	shapes, [for	angles make a	quadrilaterals and	facts and find	Drawing and
	edges, faces,	quarter and	example, a circle	half-turn, three	triangles, based	missing lengths	<u>Construction</u>
	curved and flat	three-quarter	on a cylinder and	make three	on their	and angles	draw 2-D shapes
		turns.	a triangle on a	quarters of a turn	properties and		using given
	<u>Drawing and</u>		pyramid]	and four a	sizes	Distinguish	dimensions and
	<u>Construction</u>			complete turn;		between regular	angles
	Compose and		Comparing and	identify whether	<u>Angles</u>	and irregular	
	decompose		Classifying	angles are greater	Identify acute and	polygons based	Recognise,
	shapes so that				obtuse angles and	on reasoning	describe and build

 ala il aluman una anguita a	Camanana and said	the are and a settle to		alaantaan alabi	simula 2 D
children recognise	Compare and sort	than or less than	compare and	about equal sides	simple 3-D
a shape can have	common 2-D and	a right angle	order angles up to	and angles	shapes, including
others shapes	3-D shapes and		two right angles		making nets (Also
within, just as	everyday objects	Identify	by size	<u>Angles</u>	shown in
numbers can.		horizontal and		Know angles are	Identifying Shapes
	Position,	vertical lines and	Position,	measured in	and Their
Use various	Direction and	pairs of	Direction and	degrees: estimate	Properties)
construction sets	Movement	perpendicular and	Movement	and compare	
in sustained	Use mathematical	parallel lines	Describe positions	acute, obtuse and	Comparing and
construction	vocabulary to		on a 2-D grid as	reflex angles	Classifying
projects eg The 3	describe position,		coordinates in the		Compare and
bears beds and	direction and		first quadrant	Identify: * angles	classify geometric
chairs.	movement			at a point and one	shapes based on
	including		Describe	whole turn (total	their properties
Comparing and	movement in a		movements	360 o) * angles at	and sizes and find
Classifying	straight line and		between	a point on a	unknown angles
Select, rotate and	distinguishing		positions as	straight line and	in any triangles,
manipulate	between rotation		translations of a	½ a turn (total	quadrilaterals,
shapes in order to	as a turn and in		given unit to the	180 o) * other	and regular
develop spatial	terms of right		left/right and	multiples of 90 o	polygons
reasoning skills	angles for		up/down		
	quarter, half and			Position,	<u>Angles</u>
Compose and	three-quarter		Plot specified	Direction and	Recognise angles
decompose	turns (clockwise		points and draw	Movement	where they meet
shapes so that	and anti-		sides to complete	Identify, describe	at a point, are on
children recognise	clockwise)		a given polygon	and represent the	a straight line, or
a shape can have	,		0 1 70	position of a	are vertically
other shapes				shape following a	opposite, and find
within it, just as	Pattern			reflection or	missing angles
numbers can.	Order and			translation, using	
	arrange			the appropriate	Position,
Sort shapes into	combinations of			language, and	Direction and
categories	mathematical			know that the	Movement
according to their	objects in			shape has not	Describe positions
properties, eg all				changed	on the full
 	1		1		

3 sided shapes,	patterns and	coordinate grid
shapes with	sequences	(all four
curved edges.		quadrants)
Position,		Draw and
Direction and		translate simple
Movement		shapes on the
Select, rotate and		coordinate plane,
manipulate		and reflect them
shapes in order to		in the axes.
develop spatial		
reasoning skills To		
describe position,		
direction and		
movement		
including		
forwards,		
backwards,		
sideways, in front,		
behind, under,		
over, beside, next		
to, in between. To		
begin to		
introduce left and		
right.		
<u>Pattern</u>		
ELG: They		
recognise, create		
and describe		
patterns.		
Stages of		
understanding		
anacistanang		

	ı	T
repeated patterns		
cont continue,		
copy, make own		
ABC pattern -		
continue a		
pattern that has		
ended mid-unit of		
repeat - can do		
the above with a		
range of patters		
e.g. ABB, ABBC,		
AABB		
Can begin to		
symbolise unit		
structure of a		
pattern the letter		
R for the red		
dinosaur		
Can begin to		
explain the rule of		
a pattern and		
then create		
another pattern		
with the same		
rule.		
Can begin to		
make patterns		
that are not linear		
e.g. around a		
circle, or a border		
with fixed		
number of spaces		

Skills	EYFS/Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<u>INTERPRETING,</u>		INTERPRETING,	INTERPRETING,	INTERPRETING,	INTERPRETING,	INTERPRETING,
Statistics	<u>CONSTRUCTING</u>		CONSTRUCTING	CONSTRUCTING	CONSTRUCTING	CONSTRUCTING	CONSTRUCTING
<u> Statistics</u>	AND PRESENTING		AND PRESENTING	AND PRESENTING	AND PRESENTING	AND PRESENTING	AND PRESENTING
	<u>DATA</u>		DATA	DATA	DATA	<u>DATA</u>	DATA
	Compare		Interpret and	Interpret and	Interpret and	Complete, read	Interpret and
	quantities up to		construct simple	present data	present discrete	and interpret	construct pie
	10 in different		pictograms, tally	using bar charts,	and continuous	information in	charts and line
	contexts		charts, block	pictograms and	data using	tables, including	graphs and use
			diagrams and	tables	appropriate	timetable	these to solve
	Introduction to		simple tables		graphical		problems
	simple tally charts				methods,		
			Ask and answer		including bar		Calculate and
	Use of 3d block		simple questions		charts and time		interpret the
	towers to		by counting the		graphs		mean as an
	interpret various		number of objects				average
	contexts of data		in each category				
			and sorting the				
			categories by				
			quantity				
			Ask and answer				
			questions about				
			totalling and				
			comparing				
			categorical data				