St. Nicholas CE Primary Academy



Progression in Calculation

Addition and Sub	traction					
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Use the	Represent and use	Recall and use	Add and subtract	Add and subtract	Add and subtract	Solve addition and
language of	number bonds and	addition and	numbers mentally,	numbers with up to	numbers mentally	subtraction multi
more and fewer	related subtraction	subtraction facts to	including: a three	4	with	step problems in
to compare 2	facts (within 10)	20 fluently, and	digit number and	digits using the	increasingly large	contexts, deciding
sets of objects		derive and use	ones; a three-digit	formal written	numbers.	which operations
	Add and subtract	related facts up to	number and	methods of		and methods to use
Find the total	one digit numbers	100."	tens; a three digit	columnar addition	Add and subtract	and why.
number of 2	(to 10), including	"Show that the	number and	and subtraction	whole numbers	
sets of objects	zero.	addition of two	hundreds.	where	with	Perform mental
by counting		numbers can be		appropriate.	more than 4 digits,	calculations,
them all	Read, write and	done in any order	Add and subtract		including using	including with
	interpret	(commutative) and	numbers with up to	Estimate and use	formal	mixed
Place numbers	mathematical	subtraction of one	three digits, using	inverse operations	written methods	operations and
in order	statements	number from	formal written	to	(columnar addition	large numbers.
	involving addition	another cannot.	methods of	check answers to a	and	
Find 1 more or	(+),		columnar addition	calculation.	subtraction)	Use their
less than a	subtraction (-) and	Add and subtract	and			knowledge of the
given number	equals (=) signs.	numbers using	subtraction.	Solve addition and	Use rounding to	order of operations
up to 20		concrete objects,		subtraction two	check answers to	to carry out
	Solve one step	pictorial	Estimate the	step	calculations and	calculations
Use vocabulary	problems	representations, and	answer to a	problems in	determine, in the	involving the four
involved with	that involve addition	mentally, including:	calculation and use	contexts, deciding	context of a	operations.
addition and	and subtraction,	a two digit number	inverse operations	which	problem, levels of	
subtraction	using concrete	and ones; a two digit	to check answers.	operations and	accuracy.	Solve problems
	objects and pictorial	number and tens;		methods to use and		involving addition,
Record using	representations and	two	Solve problems,	why.	Solve addition and	subtraction,
marks they can	missing number	two digit numbers;	including missing		subtraction multi-	multiplication and
explain	problems.	adding three one	number problems,		step	division.
		digit numbers.	using number facts,		problems in	
	Represent and use		place value, and		contexts deciding	
	number bonds and		more complex		which	

related subtraction	Recognise and use	addition and	operations and	Use estimation to
facts within 20.	the inverse	subtraction.	methods to use and	check answers to
Add and subtract	relationship between		why.	calculations and
one digit and two	addition and			determine in the
digit numbers to 20,	subtraction and use			context of a
including zero.	this to check			problem, an
	calculations and			appropriate
Read, write and	solve missing			degree of accuracy.
interpret	number problems.			
mathematical				
statements involving	Solve problems with			
addition (+),	addition and			
subtraction (-) and	subtraction: using			
equals (=) signs.	concrete objects and			
	pictorial			
Solve one step	representations,			
problems that	including those			
involve addition and	involving numbers,			
subtraction, using	quantities and			
concrete objects and	measures; applying			
pictorial	their increasing			
representations, and	knowledge of mental			
missing number	and written			
problems such as 7=	methods.			
? – 9				
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.			

Multiplication ar EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Begin to solve	Count in multiples	Recall and use	Recall and use	Recall and use	Multiply and divide	Multiply multi-digit
problems	of twos, fives and	multiplication and	multiplication and	multiplication and	numbers mentally	number up to 4
involving	tens.	division facts for the	division facts for the	division facts for	drawing upon	digits by a 2 digit
doubling,	Solve one step	2, 5 and 10 times	3, 4 and 8	multiplication tables	known facts.	number using the
halving and	problems involving	tables, including	multiplication	up to 12 x 12.		formal written
sharing	multiplication and	recognising odd and	tables.		Multiply and divide	method of long
-	division, by	even numbers.		Count in multiples of	whole numbers by	multiplication.
Record using	calculating the		Calculate	7, 6, 9 and 1000	10, 100 and 1000.	
marks they can	answer using	Calculate	mathematical	Use place value,	Identify multiples	Divide numbers up
explain	concrete objects,	mathematical	statements for	known and derived	and factors,	to 4 digits by a 2
	pictorial	statements for	multiplication and	facts to multiply and	including finding all	digit whole number
	representations and	multiplication and	division within the	divide mentally,	factor pairs of a	using the formal
	arrays with the	division within the	multiplication tables	including:	number, and	written method of
	support of the	multiplication tables	and write them	multiplying by 0 and	common factors of	long division, and
	teacher.	and write them	using the	1; dividing by 1;	two numbers.	interpret
		using the	multiplication (x),	multiplying together		remainders as
		multiplication (x),	division (÷) and	three numbers.	Recognise and use	whole number
		division (÷) and	equals (=) signs.		square numbers	remainders,
		equals (=) sign.		Solve problems	and cube numbers	fractions or by
			Solve problems	involving multiplying	and the notation for	rounding as
		Solve problems	involving	and adding,	squared (2) and	appropriate for the
		involving	multiplication and	including using the	cubed (3)	context.

multiplication and	division, using	distributive law to		
division, using	materials, arrays,	multiply two digit	Solve problems	Divide numbers up
materials, arrays,	repeated addition,	numbers by one	involving	to 4 digits by a 2
repeated addition,	mental methods,	, digit, integer scaling	multiplication and	digit number using
mental methods	and multiplication	problems and	division including	the
and multiplication	and division facts,	, harder	using their	formal written
and division facts,	including problems	correspondence	knowledge of	method of short
including problems	in context.	problems such as n	factors and	division,
in contexts.		objects are	multiples, squares	interpreting
	Show that	connected to m	and cubes.	remainders
Show that the	multiplication of two	objects.		according to
multiplication of	numbers can be		Know and use the	context.
two numbers can	done in any order	Recognise and use	vocabulary of prime	
be done in any	(commutative) and	factor pairs and	numbers, prime	Perform mental
order	division of one	commutativity in	factors and	calculations,
(commutative) and	number by another	mental calculations.	composite (non-	including with
division of one	cannot.		prime) numbers.	mixed
number by another		Multiply two digit		operations and
cannot.	Solve problems,	and three digit	Establish whether a	large numbers.
	including missing	numbers by a one	number up to 100 is	
	number problems,	digit number using	prime and recall	Identify common
	involving	formal written	prime numbers up	factors, common
	multiplication and	layout.	to 19.	multiples and prime
	division, including			numbers.
	positive integer		Multiply numbers	
	scaling problems		up to 4 digits by a	Use their
	and correspondence		one or two digit	knowledge of the
	problems in which n		number using a	order of operations
	objects are		formal written	to carry out
	connected to m		method, including	calculations
	objectives.		long multiplication	involving the four
			for 2 digit numbers.	operations.

Write and calculate mathematical statements for	Divide numbers up to 4 digits by a one digit number using	Solve problems involving addition, subtraction,
multiplication and division using the multiplication tables they know, including	the formal written method of short division and interpret	multiplication and division. Use estimation to
for two-digit numbers times one- digit numbers, using mental and	remainders appropriately for the context.	check answers to calculations and determine in the context of a
progressing to formal written methods.	Solve problems involving addition and subtraction, multiplication and	problem, an appropriate degree of accuracy.
	division and a combination of these, including understanding the	
	use of the equals sign.	