Mill Lane
PRIMARY SCHOOL

Learning through hard work, friendship and fun.

Calculation Policy
Reviewed July 1st 2021

Calculation Policy Forward – Reviewed July 2021

Please note:

All methods for the 4 calculations in this policy will be shown and taught to the children at school.

Children working at mastery standard in numeracy can select their own methods for calculations, whether from our policy or not.

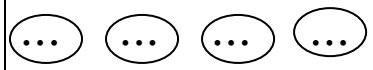
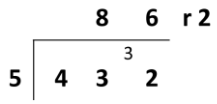
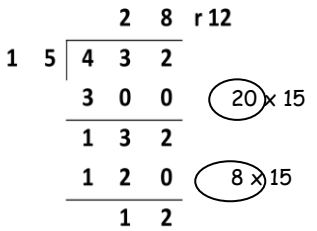
Mental methods will be developed and consolidated and children should draw on a written method if they cannot tackle a calculation mentally (possibly with informal jottings).

If you have any queries at all ask the maths co-ordinator or the class teacher and we will talk you through the process.

	EYFS	EYFS	KS1	KS2	Additional for KS2
Addition	Counting forwards in 1s Counting on and back in 1s Number bonds to 10	Use large number tracks to jump along (forwards and back) Pattern facts Large number tracks jumping along Use signs + = Know doubles to 5 + 5 in head Addition with apparatus or a given (published) number line or number track to 10 Recording pictorial with matching digits Use fingers to count on Jumping along. Numicon to learn to count Touch count objects Nursey rhymes and songs.	Make inverse connections Add multiples of 10 up to 100 using 100 square Use 100 square and 10s and units apparatus Use fingers or apparatus to count on Use given number line or 100 square (counting on) (2 digit + 2 digit) Partition to add (2nd number only) 59 + 15 = 59 + 10 =69 69 + 5 = 74 Therefore 59 + 15 is 74	Use this to lead up to column method if necessary 3 7 4 4 9 5 + 9 1 6 0 7 0 0 8 6 9 Traditional column method 374 + 495 1 3 7 4 4 9 5 + 8 6 9	

	EYFS	EYFS	KS1	KS2	Additional for KS2
Subtraction	Less than and fewer than Nursery rhymes and songs – 5 current buns Using their fingers to count. Numbers to 5	Take away objects or apparatus from a group. OR take away visuals from IWB. Use known number bonds to 10 Subtraction with apparatus or a given (published) numberline to20. Recording pictoral with matching digits. Use signs - =	Make inverse connections Subtract multiples of 10 up to 100 using 100 square and then in head counting back in 10s To know halves up to half of 20 (and link to doubling) Find the difference (less than 10) by counting on, on fingers A blank box / a question mark to stand for unknown eg 10 - Δ =3 Partition numbers 45-12 (jottings to show 12 is 10 and 2) 45-10=35 35-2 = 33	932 – 457 becomes 8 12 1 9 3 2 – 4 5 7 4 7 5 Answer: 475	
Multiplication		Sorting apparatus in same sized groups. Counting in groups of same size, eg counting in 2s, 5s, 10s	Learn times tables by chanting x1,2,5,10 Relate multiplication to repeated addition eg 5 + 5 + 5 = 3 x 5 Describe an array eg: • • • • • • • • • • 5 X 2 = 10 Learn x2, x3 and x5 times tables	Learn times tables to 12 x 12 Multiply by multiple of 10 by knowledge of HTU: *I know 3 x 5 = 15, so therefore I know 3 x 50 = 150*	Short multiplication (when multiplying up to x12) 2741 x 6 4 2 2 7 4 1 X 6 1 6 4 4 6

	EYFS	EYFS	KS1	KS2	Additional for KS2
				GRID METHOD TO BE USED AS A JOTTING TO SUPPORT MENTAL METHODS 32 x 6 = 192 30 | 2 6 | 180 | 12 180 + 12 = 192	Long multiplication (when multiplying by x13 or higher) 124 x 36 1 2 x 1 2 4 3 6 1 1 7 4 4 3 7 2 0 4 4 6 4 Be aware of eg 124 x 96 where numbers written in small print can be confused.
Division	Sharing objects	Group apparatus (eg 14 shoes, put into 2s) Sharing apparatus between a number of people (eg 15	Learn inverses of known multiplications and use vocabulary sharing or grouping Remainders for calculations relating to x2,5 10 by counting in that number (grouping) and seeing what is left over.	Divisions of all numbers up to 100 either with or without remainders (whole numbers), by counting in given divisor and seeing if there are any 'left over' (grouping)	Short division (Bus stop method) This is when dividing by numbers between 1 and 12 inclusive

	EYFS	EYFS	KS1	KS2	Additional for KS2
		sweets shared between 5 people) Half numbers to 10 in head and using resources.	Pictoral sharing 12 ÷ 4 =  3 (in each plate)	~Ie using associated multiplication facts. Linear lines and squares	432 ÷ 5 becomes  Answer: 86 remainder 2 <u>Long division</u> <u>(this method used to be called chunking)</u> This is when dividing by numbers above 9 432 ÷ 15 becomes  Answer: 28 remainder 12 Remainders can be expressed as whole numbers left over, or fractions or decimals.

Resources that Early Years, KS1 and KS2 will use throughout the year.

Early Years
Resources and ideas
Twinkl
Tes
Activity village
Sparkle box
Communication4all
Primary resources

Numicon
Touch count objects
Nursery rhymes and songs
Number fans
Number counters
Fingers
Number tracks
Money
Cubes
Dice
Lego
Dominoes
10 frames
Timers
2D and 3D shapes
20 beads
Ordering numbers sticks
Threading numbers in order
Peg games
Magnetic numbers
Umber tiles
Washing line / number line
Mathematical games / board games

KS1
Resources and ideas:
Twinkl
NCETM
White Rose

2D and 3D shapes
Dice
Spotted dice
Flip chart
10 square / 100 square
Pegboards
Number fans
Coins
Magnetic numbers
Cubes
Tens frames
Base 10
Numicon
Number lines
Multilink
Place value counters – physical objects
Teddies
10s grids

KS2
Resources and ideas:
Heinemann books
Abacus books
Abacus evolve books
Power maths books
Twinkl
White rose maths
NCETM
Old numeracy strategy
TES
ITP

Squashy boxes
Hidden number fans.
outdoors
'work of art'
'just a minute'
'Grids' (or fluency work/precision teaching)
'odd one out'
'same and different'
Counting sticks
Board games / maths starter games
Jigsaws
Numicon
Base 10
Measuring snakes
100 bead strings
Maths Packs and Primary Games
100 squares
Times table grids up to 12 x 12
Whiteboards
Number lines
Cubes
2D and 3D shapes
Clocks
Base 10