

On the Boil

Year 3 Pupils need to continuously use mathematical language alongside manipulation of objects to understand the key concepts in Year 3.

Domain/aspect	Autumn	Spring	Summer	Key resources, representations and games
Counting	Counting forwards and backwards in multiples of 1, 2, 3, 5 and 10 from 0, and in steps of 10 from numbers other than 10	Count forwards and backwards in multiples of 50 and 100. Count forwards and backwards in multiples of 4.	Count forwards and backwards in multiples of 1,2,3,4,5,8,10,50 and 100.	Counting sticks, 1p, 2p, 5p and 10p coins and money box/pot, Numicon 1,2,5,10 shapes Numicon or straws bundled into tens for counting on in tens from numbers other than 10. ITPS – counting, counting on and back, numbergrid, numberline, beadsticks, thermometer
Counting	Count in multiples of 100 from any two digit number.	Count in 10s forwards and backwards from any 2 or 3 digit number crossing hundreds barriers.	Count forwards and backwards in 10s and 100s from any 3 digit number crossing decade and hundreds barriers	Counting sticks, Numicon, straws bundled in tens, dienes, 200 square, 1p,10p, £1 coins. Switch game
Counting	Counting forwards and backwards in halves.	Counting forwards and backwards in halves, quarters from 0.	Counting in tenths across tens barriers	Counting stick, dienes, cuisiniare, numicon fraction pictures
Number and place value	Partitioning, combining and re-combining numbers beyond 20 in many different ways eg $17 = 5 + 5 + 5 + 2$	Partitioning, combining and re-combining numbers beyond 20 in many different ways eg $17 = 5 + 5 + 5 + 2$	Partitioning, combining and re-combing numbers beyond 100 and up to 1000 in many different ways eg. $232 = 200 + 30 + 2$ and $232 = 230 + 2$ and $232 = 122 + 10$.	Numicon Cuisenaire Coins Zap the digit calculator game
Number and place value	Positioning two-digit numbers on a numberline relative to multiples of 10, identifying	Positioning two and three-digit numbers on partially labelled and empty numberlines.	Positioning two and three-digit numbers on an empty numberline.	Numbered, partly numbered and blank numberlines, masking tape, chalk, Ordering numbers ITP Real life items to order ie. Food cans (price, weight)
Number and place value	Make two-digit numbers using un-structured, structured apparatus and place value cards saying the value of each digit.	Make two digit numbers using structured apparatus and arrow cards saying value of each digit.	Make two and three-digit numbers using structured apparatus saying value of each digit.	Multi-link, counters, Numicon, Coins, Straws bundled into tens Dienes, place value arrow cards Nasty game
Addition and subtraction	Rapid recall of addition and subtraction facts within 20, represented as missing number problems with = symbol in any position.			Numicon, Cuisenaire Double sided counters, tens frames, balance pans, fingers
Addition and subtraction	Rapid recall of pairs of numbers totalling 5, 10 and 20.	Use bonds to derive pairs of numbers to any multiple of 10 or 100. ie. $3 + 7 = 10$ therefore $13 + 7 = 20$ and $23 + 7 = 30$		Numicon, cuisiniare, fingers, dienes, coins
Addition and subtraction	Bridging when adding a single digit to a two digit number. ie. $36 + 7 = 36 + 4 + 3$	Bridging/rounding when adding a single digit number to a two or three digit number ie. $136 + 8 = 136 + 4 + 4$ or $136 + 10 - 2$		Bead strings, Numicon, Cuisenaire, number lines, dienes, Teaching children to calculate mentally 2010 P35-38
Addition and subtraction	Add two/three numbers by reordering ie. $6 + 7 + 3 =$		Add two/three two digit numbers by reordering ie. $40 + 25 + 60 + 75 =$	Teaching children to calculate mentally 2010 P30
Addition and subtraction	Doubling and halving numbers – rapid recall up to $20 + 20$			Fingers, numicon, Cuisenaire, multilink, tens frames, double bead bars
		Use doubles to support understanding of 4s and 8s timestables.		
Multiplication and division	Rapid recall of multiplication and related division facts – 2s, 5s and 10s	Rapid recall of multiplication and related division facts – 2s,5s,4s, 50s, 100s	Rapid recall of multiplication and related division facts – 1,2,3,4,5,8,50 and 100.	2p and 10p coins, Numicon, fingers, money pots
Measurement	Reading the time to five minutes	Reading all times with 12 hour clocks and relating to counting and bridging.	Reading the time with 12 and 24 hour clocks	Clocks with geared hands, circular counting bars, 5p coins, ITPs