
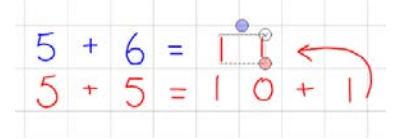
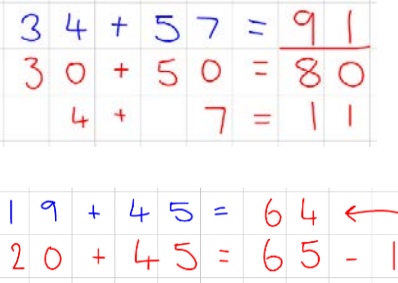
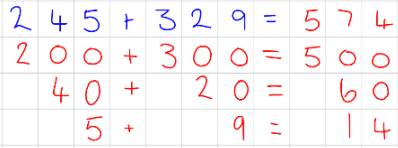

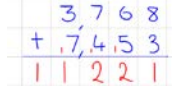




Calculation Policy - Addition

Expectation all children will have reached by	Tasks to be independently performed after quality teaching involving required apparatus.	Further notes and information <i>Aspects to push at home</i>	Images
Reception	Counting objects - One more – Counting 2 objects together with a total less than 20 - Use fingers and number lines.		
Year 1	Number bonds to 10.* Doubles to 10.* adjust near doubles if ready (See image). Secure reception objectives so independently able to complete.	Until instantly recalled* Number facts +3 and +4	
Year 2	Rounding to 10.* Partitioning to answer 2 digit questions (See image 1) that don't fit with number bonds, doubling (Image in year 1) or rounding (See image 2). Begin to adjust with the skills they have using RAPA-CODA-NUMBO for addition.	Until instantly recalled* Ensure children can see number bonds in questions in both tens and units but don't confuse the 2 Number facts 5 to 9	
Year 3	Use RAPA-CODA-NUMBO when they first see an addition question. Partition 3 digit numbers to solve (See image). Number bonds to 100*	Until instantly recalled* Teach these as number bonds to 9 for tens and 10 for units. 90+10=100 Missing number facts	
Year 4	Column addition for 3 digit numbers without carrying to begin. 3 digit numbers with carrying and explanation (See image)	Still provide 3 digit questions that can be solved using RAPA CODA NUMBO. This can be combined with grid multiplication. Refer to the numbers in place value, 7 tens or 12 hundreds so 1,200	
Year 5	4 digits and above with columns	Still provide 4+ digit questions that can be solved using RAPA CODA NUMBO.	
Year 6	Word problems – speed – problem solving - RAPA-CODA-NUMBO		


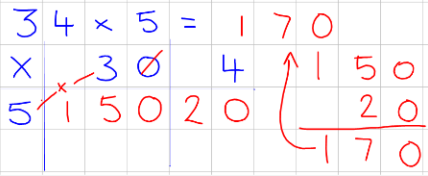
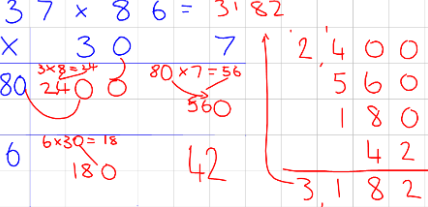



Calculation Policy - Subtraction

Expectation all children will have reached by	Tasks to be independently performed after quality teaching involving required apparatus.	Further notes and information <i>Aspects to push at home</i>	Images
Reception	One Less than a number - Counting backwards from any given number to 20.	<i>Inverse of the number facts +1 and +2</i>	
Year 1	Removing items from a group and terminology of take away Halves to ten even numbers first then odd*	Until instantly recalled* <i>Inverse of the number facts +3 and +4</i>	
Year 2	Inverse number bonds and fact families e.g. $10 - \square = 6$ Halving to 20 (See image 1) Rounding to subtract (See image 2)	Until instantly recalled* <i>Inverse of the number facts 5 to 9</i>	
Year 3	Reverse the numbers to find the difference on a number line 2 and 3 digit 2 digit – reverse numbers, jump to next 10, jump to final 10, jump to final number, add total of 3 jumps 3 digit – reverse numbers, jump to next 100, jump to final 100, jump to final number, add total of 3 jumps	<i>Missing inverse number facts</i>	
Year 4	Column subtraction without borrowing 3 digit, link the previous model and this as find the difference models.	Still refer to each as their place value, 5 hundreds or 7 tens subtract 5 tens.	
Year 5	Column subtraction with borrowing 3 digits and above	When explaining the borrowing, it's not a trick we are simply swapping	
Year 6	Word problems – speed – problem solving	Include decimals, fractions and measures when secure at each section.	



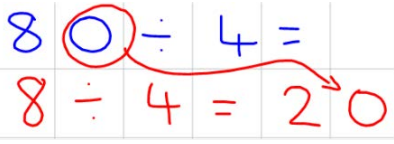



Calculation Policy - Multiplication

Expectation all children will have reached by	Tasks to be independently performed after quality teaching involving required apparatus.	Further notes and information <i>Aspects to push at home</i>	Images
Reception	Counting in 2's 5's and 10's Doubling and knowing it's the same number add itself		
Year 1	"Groups" or "lots of" a number as multiplication. Physical placing and grouping evenly of objects or beads on an abacus.		
Year 2	Repeated addition and initial focus on tables to be pushed at home. Show the children how they can practise, counting in sequence with numbers on sight then remove numbers one at a time (forwards and backwards). Finally use random selection like the telephone pad.	You press a number and the children recall that multiple of the times table Number facts 2,5 and 10	
Year 3	Teach children how to multiply multiples of ten by removing the 0 and calling the number a ten. 30 x 5 is 3 tens x 5 which is 15 tens. How do I write 15 tens? 150! Grid multiplication 2x1 digit place value focus and link with addition policy for recombine (Use tables that they can mentally recall).	Children may still not be ready for column addition so continue with partitioning to add, 1 hundred and 7 tens Number facts 3,4 and 9	
Year 4	Begin to use grid multiplication for 3x1 digits and when very confident 2x2 digits. Make sure children have it clearly modelled to them exactly which calculation is answered where.	Number facts to 12's	
Year 5	Column multiplication is the continuation and references should be made to where the children are making short cuts. Instead of drawing the grid we will just look for the questions. Then we are ready to column add.	By placing the 0's in at the question writing stage the children will remember that they multiply the 2 tens first then tens by units finally units.	
Year 6	Word problems – speed – problem solving	Include decimals, fractions and measures when secure at each section.	



Calculation Policy - Division

Expectation all children will have reached by	Tasks to be independently performed after quality teaching involving required apparatus.	Further notes and information <i>Aspects to push at home</i>	Images
Reception			
Year 1	Sharing equally with objects.		
Year 2	Sharing with pots and dots (See Image). Halving to 10 Halving to 20 (see image in year 2 subtraction).	<i>Inverse multiplication knowledge for 2, 5 and 10</i>	$27 \div 3 = 9$ 
Year 3	Remainders with objects- Halving to 100 (Extend image in year 2 subtraction to 3 partitions) Continue with pots and dots in inverse is not instantly recalled Chunking past 10s barrier $52 \div 4 =$ or $88 \div 4 =$ (See image)	<i>Inverse multiplication knowledge for 3, 4 and 9</i>	$76 \div 4 = 19$ $40 \div 4 = 10$ $36 \div 4 = 9$ 
Year 4	Using knowledge of tables for div by 10 and 100s (See Image)	<i>Inverse multiplication knowledge for tables to 12</i>	$80 \div 4 =$ $8 \div 4 = 20$ 
Year 5	Remainders past 10s barriers Bus stop method		
Year 6	Word problems – speed – problem solving Push on to long division if comfortable.	Include decimals, fractions and measures when secure at each section.	