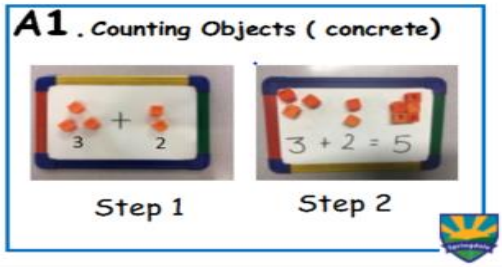
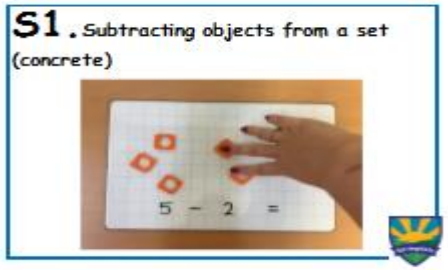
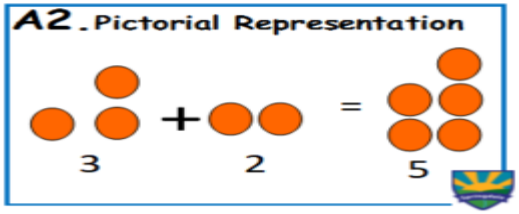
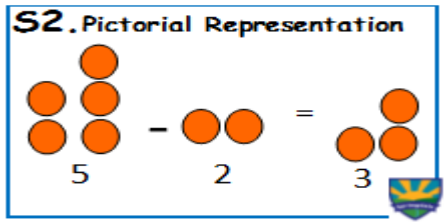
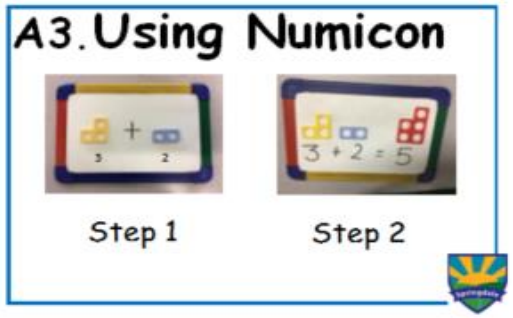
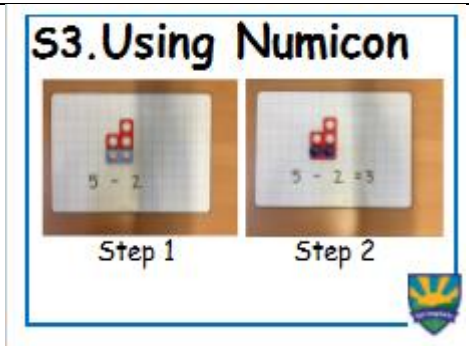
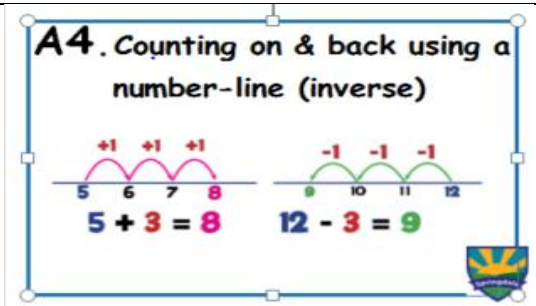
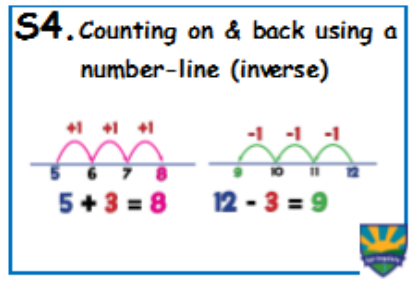
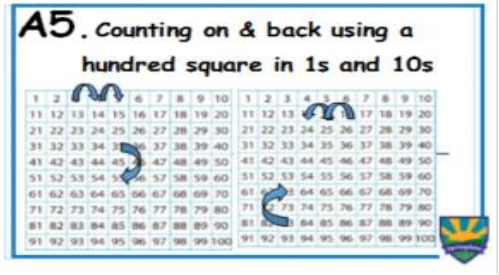
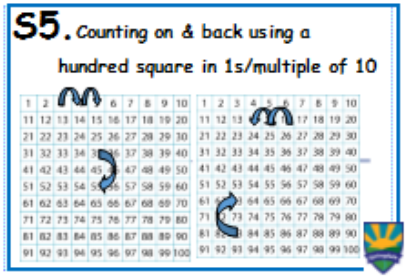
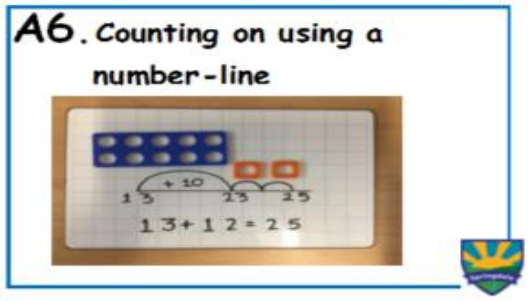
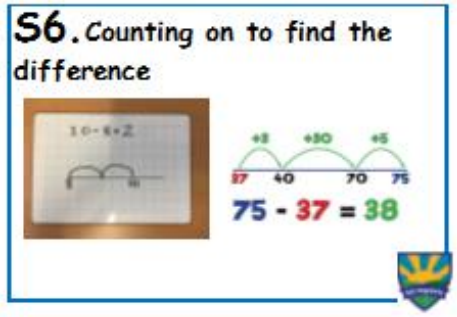
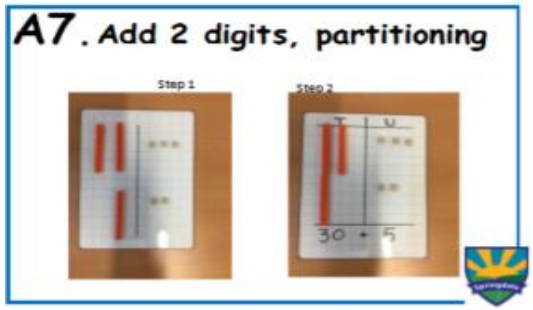
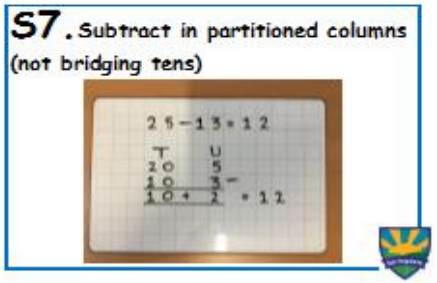
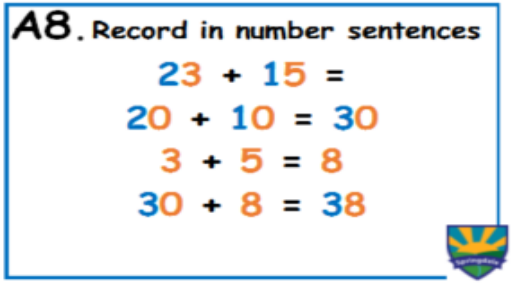
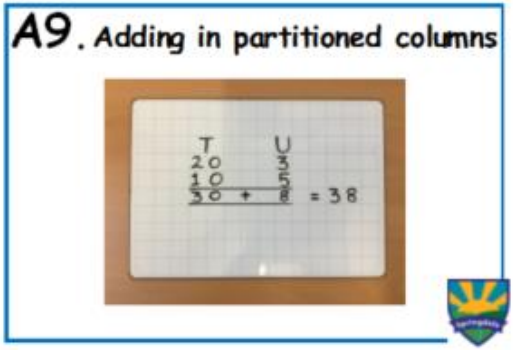
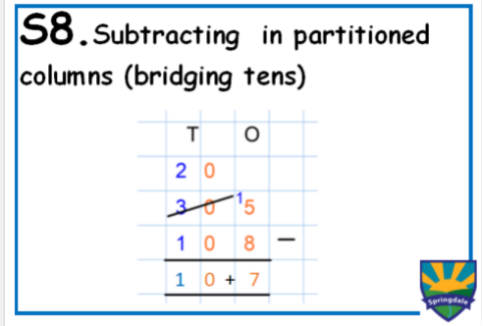
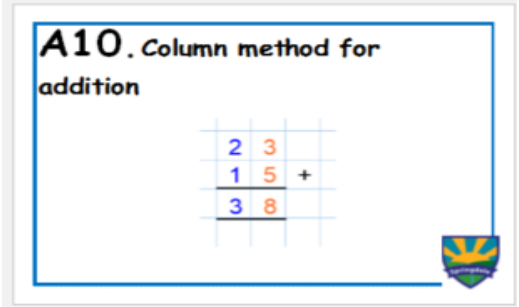
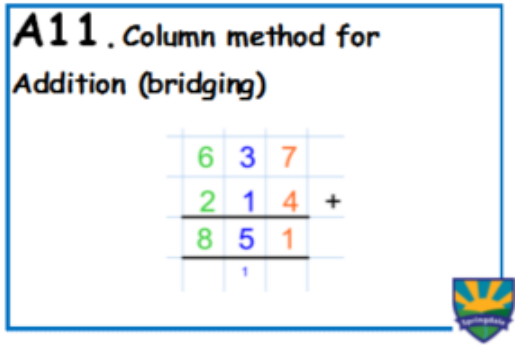
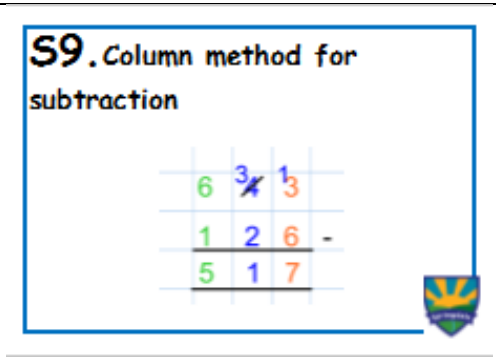
Visual Learning Steps for Written Calculations: Addition and Subtraction

Expected By end of	ADDITION	Key Concepts and Vocab	SUBTRACTION	Key Concepts and Vocab
Year 1		Recognising numbers and their values to 10. Counting in 1s ***more*** ***and/plus/add*** ***equal to/equals*** ***altogether***		Reocognising numbers and their values to 10. ***less than*** ***takeaway*** ***left***
Year 1		Recognising numbers as groups ***more*** ***and/plus/add*** ***equal to/equals*** ***altogether***		Recognising numbers as groups. **less than** **takeaway** **fewer** **left over**
Year 1		Writing number sentences to match concrete representations. Addition results in a larger number ***more*** ***and/plus/add*** ***equal to/equals*** ***altogether***		Write number sentences to match concrete representation. Subtract is the same as takeway and results in a smaller number. ***Less than*** ***subtract*** ***takeaway*** ***minus*** ***difference between***

Year 1		Finding the difference can be counting on or back. ***more*** ***and/plus/add*** ***equal to/equals*** ***altogether*** ***less than*** ***takeaway*** ***left*** ***difference between***		Finding the difference can be counting on or back. ***more*** ***and/plus/add*** ***equal to/equals*** ***altogether*** ***less than*** ***takeaway*** ***left*** ***difference between***
Year 2		Understand that only the ones column stays the same when adding or subtracting 10s. ***Column*** ***10s digit*** ***1s digit*** ***count on/back*** ***more/less*** ***add/subtract*** ***pattern***		Understand that only the ones column stays the same when adding or subtracting 10s. ***column*** ***10s digit*** ***1s digit*** ***count on/back*** ***more/less/fewer*** ***add/subtract*** ***pattern*** ***difference***
Year 2		Counting in 1s progressing to larger multiple jumps. ***add/total*** ***Partition*** ***Count on*** ***altogether***		Starting from the smallest and counting on is easier than counting back. Progress to larger multiple steps. ***count back/count on*** ***minus*** ***subtract*** ***takeaway*** ***left over*** ***difference***

Year 2		Ability to partition tens and ones is vital ***ones/units*** ***Tens*** ***hundreds*** ***partition*** ***total*** ***altogether*** ***total***		Ability to partition tens and ones is vital ***ones/units*** ***Tens*** ***hundreds*** ***partition*** ***subtract*** ***recombine minus*** ***subtract*** ***takeaway*** ***left over*** ***difference***
Year 2		Understanding place value is vital ***partition*** ***calculate*** ***recombine*** ***increase*** ***altogether*** ***total*** ***sum***		
Year 3		An understanding of the commutative order of multiplication. Leave spaces between partitioned columns. Always start with the ones/units.(the smallest number) ***partition*** ***calculate*** ***recombine*** ***increase*** ***altogether*** ***total*** ***sum***		Understanding that subtraction does not have a commutative order (digits can't be swopped) so exchange may be needed. ***exchange*** ***minus*** ***subtract*** ***takeaway*** ***left over*** ***difference***

Year 3		Encourage estimation/approximation using rounding: 20+20=40 Neatness and accurate columns is vital. Start with the smallest column. ***estimate*** ***approximate*** ***digit*** ***figure*** ***altoether*** ***total*** ***sum***		
Year 4		Carry the tens to the next column. Make the carrying figure smaller. ***carrying figure*** ***altogether*** ***total*** ***sum***		Encourage estimation/approximation using rounding: 640-120=520 Neatness and accurate columns is vital. Start with the smallest column. ***estimate*** ***approximate*** ***digit*** ***figure minus*** ***subtract*** ***takeaway*** ***left over*** ***difference***

Year 5	**A12. Addition of decimals/money** 6 3 · 7 2 1 · 4 + 8 5 · 1 1	Ensure column values are correct. Put decimal points in first. The decimal point DOESN'T move. Remember money has 2 decimal places. ***decimal point*** ***decimal places*** ***place holder*** ***altogether*** ***total*** ***sum*** ***more*** ***greater***	**S10. Subtraction of decimals/ money** $^{1}2\ ^{1}3 \cdot 7$ 1 8 · 4 - 0 5 · 3	Ensure column values are correct. Put decimal points in first. The decimal point DOESN'T move. Remember money has 2 decimal places. ***decimal point*** ***decimal places*** ***place holder*** ***minus*** ***subtract*** ***takeaway*** ***left over*** ***difference***
Year 3/4/5.	**A13. Addition of fractions** $\frac{1}{4} + \frac{1}{4} = \frac{1+1}{4} = \frac{2}{4}$	Only add the numerators, the denominators MUST be the same. **By Year 5:** **To include finding common denominators, mixed fractions and lowest/simpliest form** ***fraction*** ***numerator*** ***denominator*** ***lowest common multiple*** ***common denominator*** ***simplest/lowest form***	**S11. Subtraction of fractions** $\frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4}$	Only subtract the numerators, the denominators MUST be the same. **Year 5** **To include finding common denominators, mixed fractions and lowest/simpliest form.** **fraction** **numerator** **denominator** **lowest common multiple** **common denominator** **simplest/lowest form**