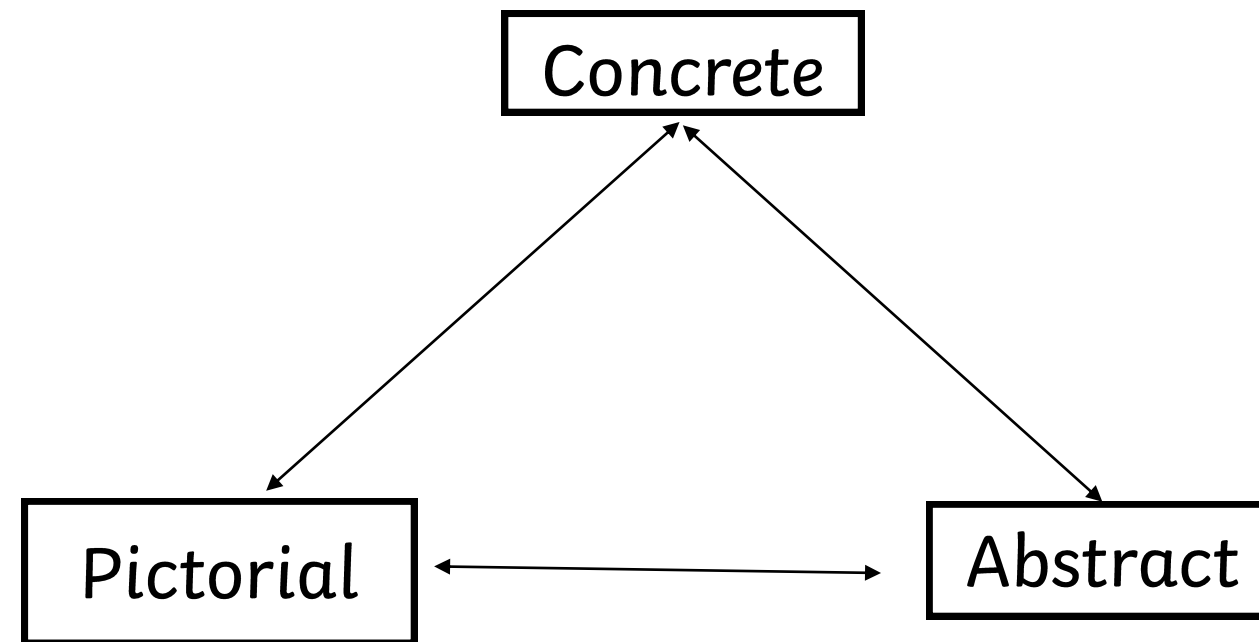
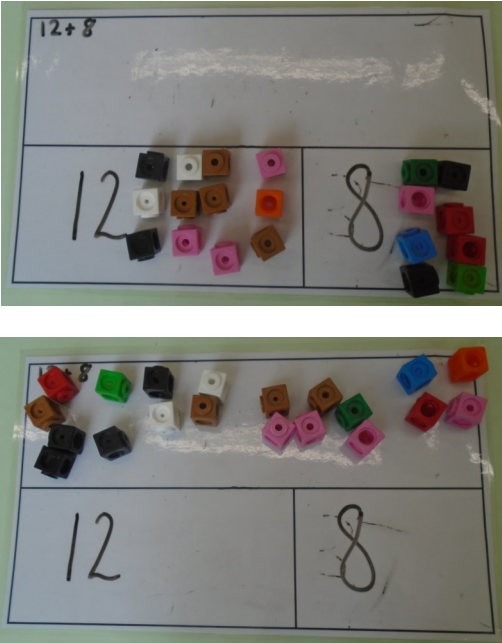
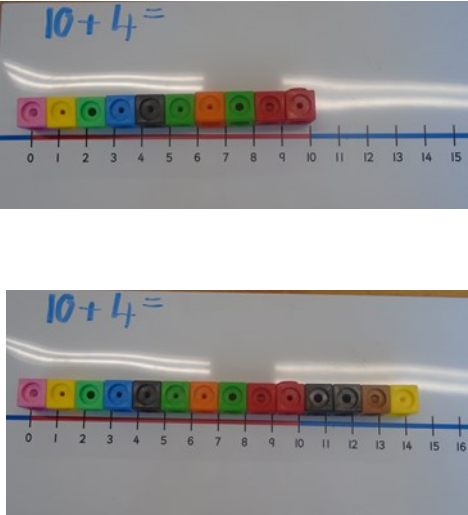
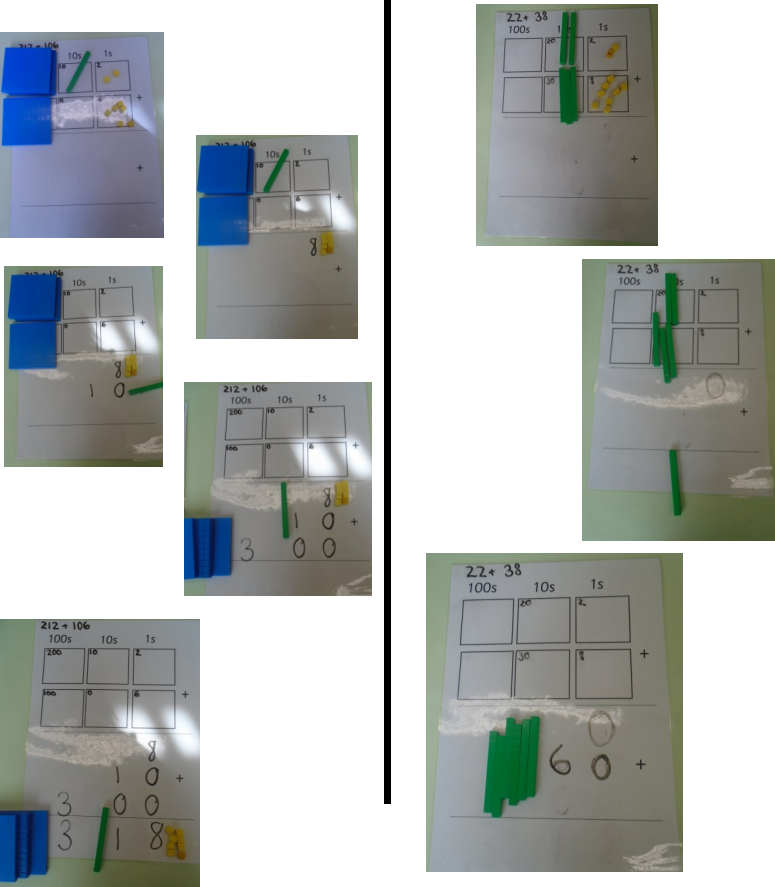
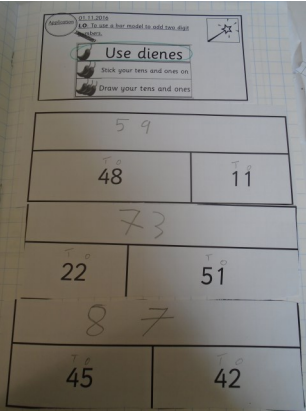
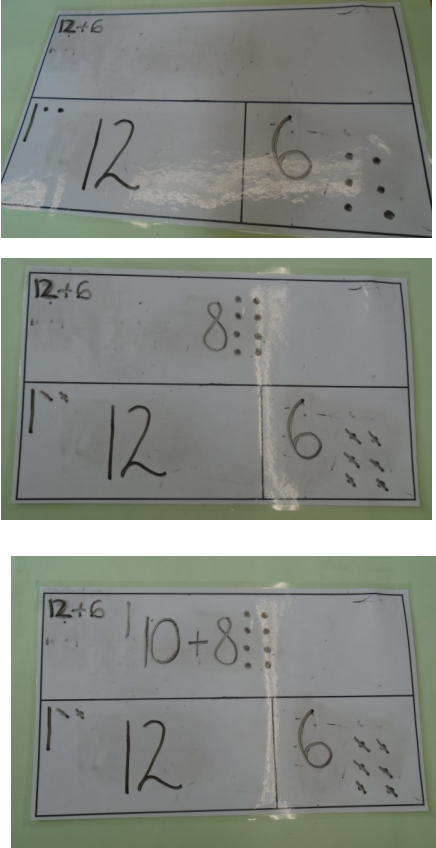
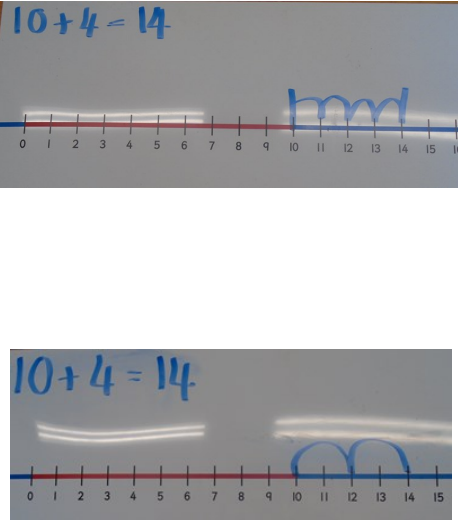
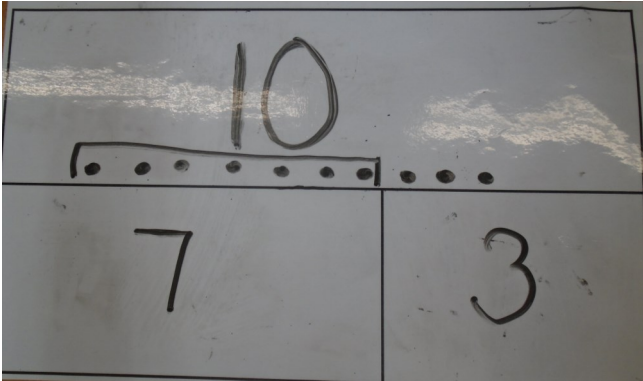
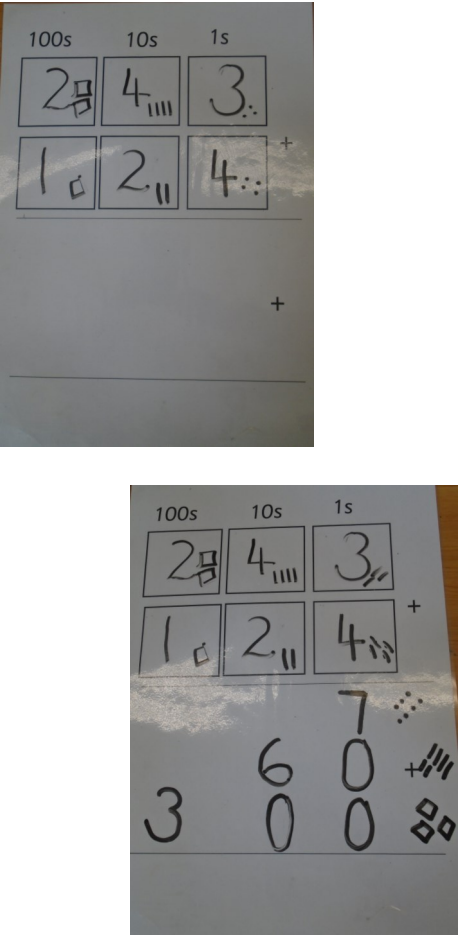
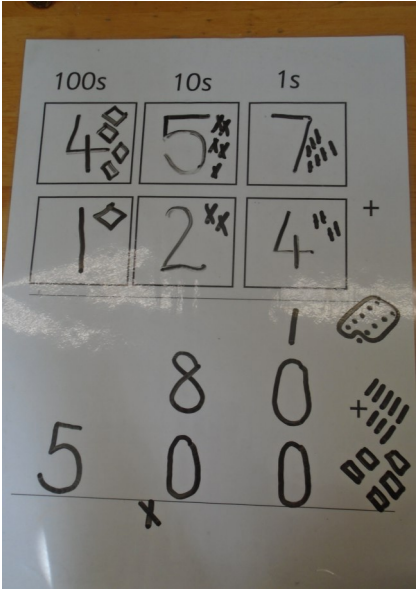
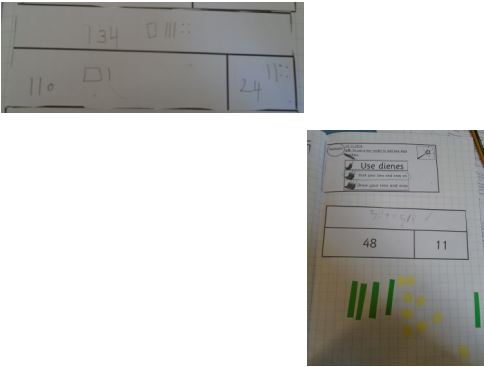


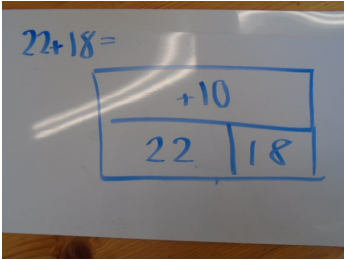
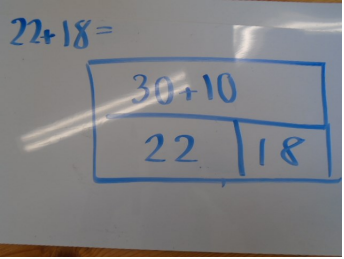
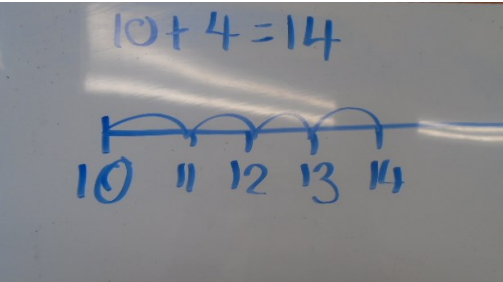
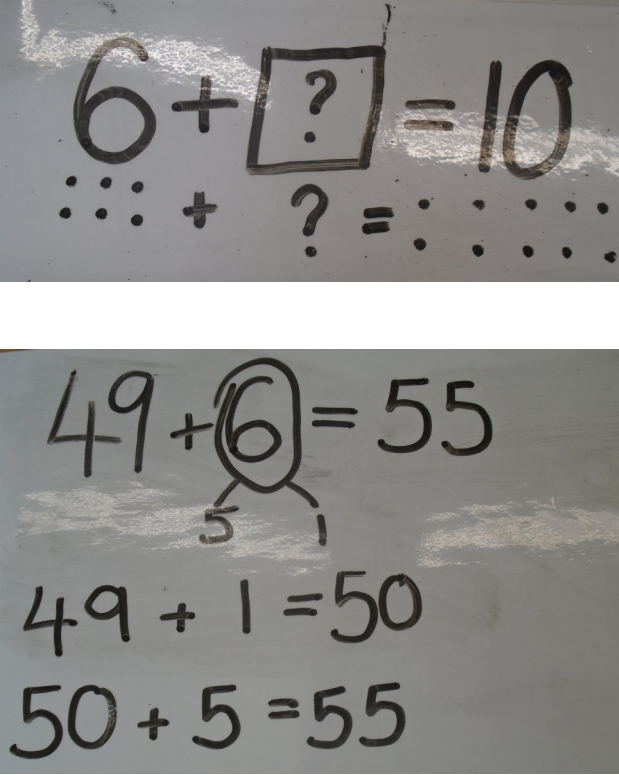
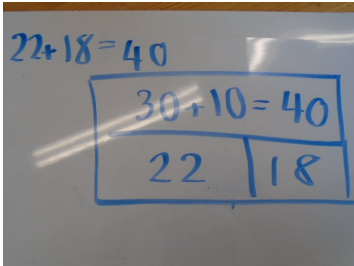
Addition



Children to be able to move through towards the stages as they feel ready, concrete resources to always be available to check calculation or reinforce method as needed. Using digits alone should be avoided until the child is secure in the method and able to apply it independently and reason using that skill in problem solving.

Addition		Part + Part = Whole	Counting On	Number Bonds	Formal Method	Formal Method (with exchanging)
Vocabulary		Parts, whole, group, bar, together, number, same as, equal, Larger number, count on, smaller number, sum, answer, same as, equal. number line, tens, ones,		Regroup, number bonds, partition, smaller, equal, same as, bigger, how many more, tens, ones, hundreds,	Number bonds, partition, smaller, column, tens, ones, hundreds, thousands, place value, exchange,	
Concrete	 Using a bar to show to groups of objects. The larger amount on the larger part, combining together on the whole part of the bar , then counting to find the answer. Counting maybe in 1s or in multiples depending on the child. Calculation to be displayed and digits can be used as well as objects.		 Using a prepared number line, children count on by adding objects. Number lines to increase in size and may be blank. Counting maybe in 1s or in multiples depending on the child. Calculation to be displayed and digits may accompany objects.	 Using resources to practise the number bonds, first to ten. Investigating all the different ways to make 10, children are then able to partition using bars. Once confident, they can use this skill for larger numbers and see the relationship between the number bonds to 10 and the number bonds to 100. Calculation to be displayed and digits may accompany objects. The aim is for this to become a mental method.	 Using resources, children partition their numbers into hundreds, tens, ones. They arrange them into a column with the ones under the ones and the tens under the tens etc. before combining them below the line and writing the answers. Exchange is to be shown 'on the doorstep', below the second line. Calculation to be displayed and digits may accompany objects.	
	<u>Possible Resources</u> cubes, counters, topic related objects, dienes, part-whole bars,		<u>Possible Resources</u> cubes, counters, number lines, bead strings, topic related objects,	<u>Possible Resources</u> topic related objects, dienes, cubes, counters, bead strings, part-whole bars	<u>Possible Resources</u> dienes, place value counters, laminated column addition mat,	
	<u>How it would look in books</u> Photograph or Scaffolded learning with that resources are being used clearly indicated. 		<u>How it would look in books</u> Photograph	<u>How it would look in books</u> Photograph	<u>How it would look in books</u> Photograph	<u>How it would look in books</u> Photograph

Addition		Part + Part = Whole	Counting On	Number Bonds	Formal Method	Formal Method (with exchanging)
Vocabulary		Parts, whole, group, bar, together, number, same as, equal, Larger number, count on, smaller number, sum, answer, same as, equal. number line, tens, ones,		Regroup, number bonds, partition, smaller, equal, same as, bigger, how many more, tens, ones, hundreds,	Number bonds, partition, smaller, column, tens, ones, hundreds, thousands, place value, exchange,	
Pictorial		 Using the bar to show to groups of jottings or pictures of objects. These can be re-drawn or re-stuck on the whole part and counted. Digits to be used as well as jottings or pictures. Calculation is written next to the bar.	 Using a prepared number line, children count on in jumps of 1 or multiples. Number lines increase in size and may be blank or show multiples. Calculation to be displayed next to the number line.	 Using prepared or self-drawn part whole diagrams, children use jottings or pictures of objects to investigate number bonds. Children use jottings or pictures of objects to partition numbers in order to make them easier to add, for example, if your adding $49 + 6 = 49 + (5+1)$. Calculation is written near each bar.	 Using place value grid, children use jottings or paper dienes to build the calculation. These can then be counted, if necessary, for the answer to be written in number form below the first horizontal line. Exchange should be shown 'on the doorstep' below the second horizontal line by another jotting or paper dienes. Digits to be used along side and calculation to be written near each calculation.	
	<u>Possible Resources:</u>	green and yellow paper to represent dienes, pictures of topic objects, explanation of 'fish, chips, peas' for jottings	<u>Possible Resources:</u>	Pre-prepared number-lines, cubes or objects,	<u>Possible Resources:</u>	green and yellow paper to represent dienes, pictures of topic objects, explanation of 'fish, chips, peas' for jottings, topic related part-whole diagrams
	<u>How it would look in books:</u>		<u>How it would look in books:</u>	<u>How it would look in books:</u>	<u>How it would look in books:</u>	<u>How it would look in books:</u>

Addition		Part + Part = Whole	Counting On	Number Bonds	Formal Method	Formal Method (with exchanging)
Vocabulary		Parts, whole, group, bar, together, number, same as, equal, Larger number, count on, smaller number, sum, answer, same as, equal. number line, tens, ones,		Regroup, number bonds, partition, smaller, equal, same as, bigger, how many more, tens, ones, hundreds,	Number bonds, partition, smaller, column, tens, ones, hundreds, thousands, place value, exchange,	
Abstract						
						
			Children draw their number lines or use blank pre-prepared number lines as needed. Number lines to start with the largest number and count on. Children count on in jumps of 1 or multiples. Calculation to be written next to the number line. Increasingly moving towards a mental method.		To be shown using simple calculations as well as using bars. Number partitioning may be seen in jottings, or explained verbally. Missing number calculations used to show the skill is embedded and the recall is quick. Jottings can be used to help understanding. If using a bar, calculation to be used as well.	
	<u>Possible Resources:</u> Pre-printed bars,		<u>Possible Resources:</u> blank number lines, rulers, pencils,		<u>Possible Resources:</u> pre-printed bars,	
		<u>How it would look in books:</u>		<u>How it would look in books:</u>		<u>How it would look in books:</u>