

Addition Year 1			
Objective and Strategy	<u>Concrete</u>	<u>Pictorial</u>	<u>Abstract</u>
Combining 2 parts to make a whole: Part – Whole model		Use pictures to add 2 numbers together.	Use the part-part-whole model below to help move into the abstract.
	Use part – part – whole model. Use cubes to add 2 numbers together.	Represent the same addition with a bar model	
		8 1	4 + 3 = 7 10 = 6 + 4
Counting on using resources and number lines	-	12 + 5 = 17	5 + 12 = 17 But the larger number in your head and
	Start with the larger number on the bead string and count along to find the answer.	Start with the larger number on the number line and count along to find the answer.	count on to find the answer.



Regrouping to make 10	6+5=11 Start with the bigger number and use the smaller number to make 10. Use ten frames.	Children to draw the ten frame and counters/cubes	7+ 4 = 11 If I am at 7, how many more do I need to make 10? Then how many more do I need to add?
Represent & use number bonds and related subtraction facts within 20	2 more than 5.	$\begin{array}{c} \hline \\ \hline $	Emphasis show be on the language 1 more than 5 is equal to 6 2 more than 5 is 7 8 is 3 more than 5



Subtraction Year 1			
Objective and Strategy	<u>Concrete</u>	<u>Pictorial</u>	Abstract
Taking away ones	Use physical objects, counters, cubes etc to show how objects can be taken away.	Draw and cross out objects to show what has been taken away / subtracted	7 – 4 = 3
	6-4=2 $4-2=2$	$\begin{array}{c} & & & & & \\ & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & &$	16 – 9 = 7
Counting Back	Move objects away from the group when counting back.	Count back in ones using a number line.	Put 13 in your head, count back 4. What number are you at now?
		Counting backwards should be underneath the line.	
Find the difference	Compare objects and amounts. 7 is 3 more than 4	Draw and count on using a number line to find the difference. $11-5=6$	Hannah has 12 sweets and her sister has 5. How many more does Hannah have than her sister?



Introducing the bar model	S Percils S Percils 3 Erasers 3 Lay objects out to represent the bar model.	$ \begin{array}{c}  +6 \\  +6 \\  0 1 2 3 4 5 6 7 8 9 10 11 12 \\  8 \\  5 \\ $	
Represent and use number bonds and related subtraction facts within 20.	Link to addition. Use the part-part-whole model to model the inverse.		5 12 7
Part-Part-Whole model	If 10 is the whole and 6 is one of the parts, what is the other part?	Use pictorial representations to show the part.	Move to the part – part – whole model with numbers.
Bar model	5-2=3		8 $2$ $10$ $10 = 8 + 2$ $10 = 2 + 8$ $10 - 2 = 8$ $10 - 8 = 2$ Important to have the answer at the front of the calculation on occasion.



Multiplication Year 1				
Objective and Strategy	Concrete	Pictorial	Abstract	
Doubling	Use concrete resources to and practical activities to demonstrate doubling. $\downarrow \downarrow $	Draw pictures to show how to double numbers and explain what they are doing. Double 4 is 8	Partition a number and then double each part before recombining. 16 10 10 10 10 10 10 10 10	
Repeated Addition	Use concrete resource to count groups of object	Use pictorial including number lines XX XX XX XX XX XX Use bar model to demonstrate the structure.	Write addition sentences to describe objects and pCictures.	



Counting in	Children use resources in set amount to	Children make representations of groups	Count in multiples of a number aloud.
multiples	count along – may use fingers or objects.	of numbers to count in multiples.	Write sequence with multiples of numbers.
			2, 4, 6, 8, 10 5, 10, 15, 20, 25, 30
		Use of number lines to show repeated	Abstract number line
		groups.	0 4 8 12
		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	
Understanding	Use objects laid out in arrays to find the	Draw representations of arrays to show	3 x 2 = 6
arrays	answer to 2 lots of 5, 3 lots of 2 etc.	understanding.	
	*****		2 x 5 = 10



Division Year 1				
Objective and	<u>Concrete</u>	<u>Pictorial</u>	Abstract	
<u>Strategy</u>				
Sharing using a range	Children practise sharing different amounts	Children use pictures or shapes to share	12 shared between 3 = 4	
of objects	using concrete, everyday objects.	sharing.	progressing onto	
		$3 \div 2 = 4$ Children to also be introduced to bar modelling to support understanding.	12 ÷ 3 = 4 Children should also be encouraged to use their 2 times table facts.	
		$12 \div 4 = 3$		