

Area of Learning: Mathematics Number					
<p>Concept: Composition</p> <p>Knowing numbers are made up of two or more other smaller numbers involves ‘part–whole’ understanding. Learning to ‘see’ a whole number and its parts at the same time is a key development in children’s number understanding. Partitioning numbers into other numbers and putting them back together again underpins understanding of addition and subtraction as inverse operations.</p>					
Typical progression within this concept	Part–whole: identifying smaller numbers within a number (conceptual subitising – seeing groups and combining to a total)	Inverse operations	A number can be partitioned into different pairs of numbers	A number can be partitioned into more than two numbers	Number bonds: knowing which pairs make a given number
Progression steps to enable typical progression within this concept	0 to 3	I can group objects together (e.g. in a selection of 5 items of crockery group all of the cups and the plates)			
	3 to 4 years	I can split 3 objects into different groups (e.g. I can give 3 bears one spoon each, I can give mummy bear 2 spoons so she can feed baby bear and herself but daddy bear can feed himself)	I know when I have split a set of 3 objects into groups, if I collect them back together there will still be 3.		
		I can split 5 objects into different groups	I know when I have split a set of 5 objects into groups, if I collect them back together there will still be 5.		
Reception	I can split 10 objects into different groups	I know when I have split a set of 10 objects into groups, if I collect them back together there will still be 10.	I can partition 3 objects into different pairs of numbers	I can partition 5 objects into different amounts of numbers (e.g. 1, 1, 1, 1, 1; 2, 1, 1, 1;...)	I can remember the number bonds that total 2.
			I can partition 5 objects into different pairs of numbers		I can remember the number bonds that total 3.
			I can partition 10 objects into different pairs of numbers		I can remember the number bonds that total 4.
					I can remember the number bonds that total 5.
					I can remember some of the number bonds that total numbers 6-10.
					I know what the word double means.
		I know the doubles for numbers 0-5			
Guidance from NCETM progression document	<i>Children need opportunities to see small numbers within a larger collection. ‘Number talks’ allow children to discuss what they see. For instance, with giant ladybirds: ‘There are 5 spots altogether. I can see 4</i>	<i>Children need opportunities to partition a number of things into two groups, and to recognise that those groups can be recombined to make the same total. Encourage children to say the whole number that the ‘parts’ make altogether.</i>	<i>Children need opportunities to explore a range of ways to partition a whole number. The emphasis here is on identifying the pairs of numbers that make a total. Children can do this in two ways – physically</i>	<i>Children need opportunities to explore the different ways that numbers can be partitioned, i.e. into more than two groups. Situations to promote this include increasing the number of pots to put a given</i>	<i>Children need opportunities to say how many are hidden in a known number of things. For example: ‘Five toys go into a tent, then two come out. How many are left in the tent?’ The child should respond that there are still three toys in the tent.</i>

	<p><i>and 1, I can see 3 and 2, and I can see 1 and 1 and 1 and 1 and 1.'</i> <i>Encourage exploration of all the ways that 'five' can be and look. Children are encouraged to look closely at numbers to see what else they can see. This reinforces the concept of conservation.</i></p>		<p><i>separating a group, or constructing a group from two kinds of things.</i></p>	<p><i>amount into, e.g. planting ten seeds into three or more pots.</i></p>	
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