Area of Learning: Mathematics Number

Concept: **Comparison**

Comparing numbers involves knowing which numbers are worth more or less than each other. This depends both on understanding cardinal values of numbers and also knowing that the later counting numbers are worth more (because the next number is always one more). This understanding underpins the mental number line which children will develop later, which represents the relative value of numbers, i.e. how much bigger or smaller they are than each other.

Typical progression within this concept		**More than / less than**	**Identifying groups with the same number of things**	**Comparing numbers and reasoning**	**Knowing the 'one more than/one less than' relationship between counting numbers**
Progression steps to enable typical progression within this concept	0 to 3	I can compare amounts saying 'lots', 'more', or 'same' (Drawing attention to changes in amount e.g. adding more bricks to a tower, eating things…)			
	3 to 4 years	I can compare two groups (when the amounts are obviously different and the objects are of a similar size) saying where there is more and where there is less.	I can match the objects in two groups to find out that they have an equal number of things.	I can say which number is more or less than another number with the support of objects.	
		I can compare two groups (when the amounts are less obviously different and the objects are of a similar size) saying where there is more and where there is less.			
	Reception	I can compare two groups (when the amounts are less obviously different and the objects are not of a similar size) saying where there is more and where there is less.	I can say that groups are equal by counting them and reaching the same number.	I can explain why a number is more or less than another number.	I know what one more than and one than a number from 1-5 is.
				I can describe a number as a lot bigger or a little bigger by looking at their positions on a number line.	I know what one more than and one than a number from 1-10 is.
				I can describe a number as a lot smaller or a little smaller by looking at their positions on a number line.	I can explain how I know what one more and one less than a number is.
Guidance from NCETM progression document		*Children need progressive experiences where they can compare collections and begin to talk about which group has more things. Initially, the groups need to be very obviously different, with one group having a widely different number of things. Collections should also offer challenges, such as including more small things and fewer large things, to draw attention to the numerosity of the comparison, i.e. the number of things, not the size of them.*	*Children need the opportunity to see that groups could consist of equal numbers of things. Children can check that groups are equal, by matching objects on a one-to-one basis.*	*Children need opportunities to apply their understanding by comparing actual numbers and explaining which is more. For example, a child is shown two boxes and told one has 5 sweets in and the other has 3 sweets in. Which box would they pick to keep and why? Look for the reasoning in the response they give, i.e. 'I would pick the 5 box because 5 is more than 3 and I want more.' If shown two numerals, children can say which is larger by counting or matching one-to-one.* *Children can compare numbers that are far apart, near to and next to each other. For example, 8 is a lot bigger than 2 but 3 is only a little bit bigger than 2.*	*Children need opportunities to see and begin to generalise the 'one more than/one less than' relationship between sequential numbers. They can apply this understanding by recognising when the quantity does not match the number, i.e. if a pack is labelled as 5 but contains only 4, the children can identify that this is not right. Support children in recognising that if they add one, they will get the next number, or if one is taken away, they will have the previous number. For example: 'There are 4 frogs on the log, 1 frog jumps off. How many will be left? How do you know?'*