MIS EYFS skills progression - Maths		
DM 2020	**3-4** • Fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Recite numbers past 5. • Say one number for each item in order: 1,2,3,4,5. • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • Show 'finger numbers' up to 5. • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals. • Solve real world mathematical problems with numbers up to 5. • Compare quantities using language: 'more than', 'fewer than'. • Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. • Understand position through words alone – for example, "The bag is under the table," – with no pointing. • Describe a familiar route. • Discuss routes and locations, using words like 'in front of' and 'behind'. • Make comparisons between objects relating to size, length, weight and capacity • Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. • Combine shapes to make new ones – an arch, a bigger triangle etc. • Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc. • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern. • Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then…'	**Reception** • Count objects, actions and sounds. • Subitise. • Link the number symbol (numeral) with its cardinal number value • Count beyond ten. • Compare numbers • Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 10. • Automatically recall number bonds for numbers 0–10. • Select, rotate and manipulate shapes in order to develop spatial reasoning skills. • Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. • Continue, copy and create repeating patterns. • Compare length, weight and capacity.
ELG 2020	• **Have a deep understanding of number to 10, including the composition of each number.** • **Subitise (recognise quantities without counting) up to 5.** • **Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.** • **Verbally count beyond 20, recognising the pattern of the counting system.** • **Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other Quantity`.** • **Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally**	
Strand	Addition	
Element		
Range		

Progression of skill	Possible misconception	Pedagogical Guidance
Know that numbers identify how many objects are in a set.	Children may not yet have developed the concept of cardinality (that the last number they say is the number of objects in the set).	Model counting objects, emphasising the last number to be said and then follow up with a sentence. For example, 'the last number I said was five so there are five cars'.
Separate a group of three or four objects in different ways, beginning to recognise that the total is still the same.	Children may think that the total number of objects changes once they are moved and will recount them.	Practise practically counting the same number of objects when arranged in lots of different ways. Allow children to discover that the total is always the same despite the arrangement.
Know that a group of things changes in quantity when something is added.	Children may not understand that when more objects are added to a group, the quantity of the group changes.	Encourage children to experience quantity changes by adding more in real-life situations with objects that they can relate to, such as snacks or toys. Using full sentences will deepen understanding. For example, 'we added two more then counted five, that means there are five trains altogether'.
Compare sets of objects, saying when they have the same number.	Children may think that 'same' refers to the appearance of the objects rather than the number in the set.	Begin by using objects that are the same colour before progressing to using objects that differ in appearance somehow, such as size or colour.
Compare sets of objects, saying which has more objects.	Children may think that the set of objects that are larger in size or are more spread out contain more than a set which contains smaller-sized objects or objects that are placed closer together	Begin by comparing groups of objects that are the same size and type, such as building bricks. Compare different layouts before you start to compare objects of different sizes. Provide children with opportunities to compare two groups of objects where the group with the smallest-sized objects have more than the group containing fewer, larger objects. For example, five buttons and three plates.
Compare sets of objects, saying how many more are in each set.	Children may be able to count each set but may not be able to compare the two numbers.	Use objects, such as two towers made of building bricks or number lines, to demonstrate counting on and exploring how many more in each tower. Line objects up carefully to compare how many more are in one line. Using a meaningful context will enable children to make sense of their learning.
Find one more than a number from one to ten.	Children may not fully understand the term 'more'. They may not understand that 'one more' will always	Adding one more in order will reinforce the concept, e.g. 'one more than zero is one, one more than one is two'. Children physically jumping along carpet tiles or using a number line with a puppet/small toy can help

	be the next number on a number line or in a counting sequence.	to make it clear that one more is the number after a given number. Giving children practical objects to count with, such as grapes, and adding one more each time then allowing them to count them will also reinforce learning.
Say the number that is one more than a given number	The concept of 'one more' may be too abstract. Children may not yet understand that one more will always be the next number on a number line or in a counting sequence.	Children may benefit from plenty of real-life examples to find one more and make links to this on a number line to identify the pattern. Number shapes may also help, as adding one to any shape will make the next shape in a sequence.
Know that numbers are made up of different numbers. For instance, four can be four and zero, one and three or two and two.	Children may not understand that numbers can be made up in many different ways.	Using a practical and fun context, such as fish and two fishbowls or cars and two garages, children can explore different ways to split the objects between them.
Represent numbers in different ways, using equipment, five or ten-frames, part-part-whole models, number lines, stories.	Children may not understand that a number can be used for cardinal, nominal and ordinal purposes.	Provide opportunities for children to explore numbers in many contexts. For example, as labels, on a number line, the number in a set or as part of a story.
Understand the effect of adding zero.	Children may not understand the concept of zero. Therefore, they may think the answer is zero when zero is added to another number.	Use objects to model adding 'zero objects' on to lots of different numbers, emphasise that the number stays the same as nothing has been added. Adding the spots on dominoes is useful. If children think the answer is zero, you can challenge them by saying 'but I can see some spots here'.
Select two groups of objects to make a given total of objects.	Children may not understand that numbers can be made by combining two groups of numbers.	Allow children plenty of time to explore a number in practical situations, such as five buns separated into two bags or five building bricks and two towers.

Recognise the number of objects without counting. (0-5)	Children may not yet be able to *subitise small numbers of objects. They may think they always have to count each object.	Arrange objects in familiar ways, such as the spot patterns on dice or dominoes. Then, arrange small numbers of objects in different ways for the children to see that the total stays the same and begin to develop the skill of subitising. Discuss groups within groups, such as seeing groups of two within a larger group of spots.
Find out the 'total' or 'how many altogether' after two sets have been combined.	The words 'altogether' or 'total' may be unfamiliar to the children. They may not understand that they need to count both sets of objects.	Provide lots of practical examples for children to explore. Provide two distinct sets of objects for children to count, such as red cars and blue cars, and move them together and demonstrate counting how many there are altogether.
Count on to add.	Children may think they need to count the number they are on when counting on to add.	Play board games to demonstrate counting on, emphasise that children need to count the 'movement', e.g. start counting once they have jumped on to the next number. This can also be demonstrated on a number line.
Uses vocabulary of equals: makes, balances, same, total.	Children may relate certain vocabulary to other meanings, e.g. 'balances', as in 'weight'.	Discuss with the children what they think a word means and model the correct use of vocabulary through adult-led activities and play in continuous provision.
Use vocabulary of addition: how many altogether, plus, more.	Children may have limited or incorrect understanding of the vocabulary of addition.	Model the use of this vocabulary. Scaffold the children's learning by describing what they are doing using the vocabulary of addition. Snack

		time would be the perfect time for this as the language is being used in a practical context.
Understand addition as an increase.	Children may not have a good understanding of ordinal number and therefore a limited awareness of how numbers increase.	Practical activities where children can experience addition in this context, such as board games and an increase in prices, age or weight. Use of vertical number lines for addition to show that the number is getting higher and therefore bigger.