Mathematics Progression

referencing Early Years Outcomes and Power Maths

Numbers ***Shape, space and measure***

2 to 3 Year Olds

Autumn	Spring	Summer
Begin to organise and categorise objects E.g putting all teddies in one pile and cars in another. Says some counting words Attempts sometimes successfully , to fit shapes into spaces on inset boards or jigsaw puzzles Begins to understand that things may happen 'now' Enjoys filling and emptying containers Uses blocks to create their own simple structures and arrangements	Recites some number names in sequence Begins to make some comparisons between quantities Creates and experiments with symbols and marks representing ideas of number Notices simple shapes and patterns in pictures Beginning to categorise objects according to size and shape Begins to use the language of size (e.g. big/small)	Uses some language of quantities, such as 'more' and a 'lot' Knows that a group of things changes in quantity when something is added or taken away selects a small number of objects from a group when asked, e.g. 'please give me one', 'please give me two' Understands some talk about immediate past and future. E.g. 'before', 'late' or 'soon' Anticipates specific time based events such as mealtimes or home time

3 to 4 Year Olds

Autumn	Spring	Summer
Uses some number names and number language spontaneously Knows that numbers identify how many objects are in a set (cardinality) Beginning to represent numbers using fingers, marks on paper or pictures (1:1 correspondence) Shows curiosity about numbers by offering comments or asking questions Shows an interest in shape and space by playing with shapes or making arrangements with objects Shows interest in shapes in the environment	Uses some number names accurately in play Sometimes matches numeral and quantity correctly Compares two groups of objects, saying when they have the same number Shows an interest in number problems Realises not only objects , but anything can be counted, including steps, claps or jumps (abstract) Uses positional language (in, on, under) Shows interest in shape by sustained construction activity or by talking about shapes or arrangements	Recites numbers in order to 10 (stable order) Separates a group of 3 or 4 objects in different ways beginning to recognise that the total is still the same (order irrelevance) Shows an interest in numerals in the environment Shows an interest in representing numbers Uses shapes appropriately for tasks Shows awareness of similarities of shapes in the environment Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'.

4 to 5 Year Olds

Autumn	Spring	Summer
Recognises some numerals of personal significance Recognises numerals 1 to 5 Counts up to 3 or 4 objects by saying one number for each item Counts actions or objects which cannot be moved Counts out to six objects from a larger group Records using marks that they can interpret and explain Selects the correct numeral to represent 1 to 5 Uses the language of more and fewer to compare two sets of objects Finds one more/one less from a group of up to five objects Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes Uses familiar objects and common shapes to create and recreate patterns and build models. Uses everyday language related to time.	Counts objects to 10 and beginning to count beyond 10 Select the correct numeral to represent 1-10 objects Counts an irregular arrangement of up to ten objects Estimates how many objects they can see and checks by counting them (beyond 5) Finds the total number of items in two groups by counting them all Says the number that is one more than a given number Finds one more/one less from a group of up to ten objects Selects a particular named shape. Orders and sequences familiar events. Can describe their relative position such as 'behind' or 'next to'. Orders two or three items by length or height.	In practical activities , beginning to use the vocabulary involved in adding and subtracting Begins to identify own mathematical problems based on own interests and fascinations Measures short periods of time in simple ways. Beginning to use everyday language related to money. Orders two items by weight or capacity. Uses mathematical terms to describe shapes

Count up to 5 objects reliably *Recognise the numerals 1, 2, 3, 4 and 5*	*Say which number is one more than a given number.* *Say which number is one less than a given number.*	*Use the language of wholes and parts*	*Accurately identify two parts and their combined whole (up to 10)*	*Recognise and describe patterns e.g.yellow, blue, yellow, blue, yellow, blue or*	*Use concrete manipulatives to double and halve numbers*

Match groups of objects to the correct numeral *Can place numbers 1-5 in order and say which number is one more or one less than a given number* *Compare quantities of identical objects to find out which group has more, fewer or the same (up to 5)* *Compare two groups of non-identical objects to find out which group has more, fewer or the same (up to 5)* *Discuss the similarities and differences between a pair of objects , using a variety of criteria (colour, shape, size)*	*Use everyday language to talk about time to solve problems:* *Order three familiar events from their day* *Use the language related to time: before, after, next, then, later*	*Use number bonds to 5 to split a whole into two parts* *Count numbers up to 10 using all counting principles (stable order, 1:1,cardinal, abstract, order irrelevance)* *Use the words more and fewer to compare groups of up to 10 items* *Start to find the difference between groups by counting on or counting back* *Compare quantities of identical objects to find out which group has more, fewer or the same (up to 10)* *Compare two groups of non-identical objects to find out which group has more, fewer or the same (up to 10)*	*Add two parts to make a whole up to 10* *Understand altogether as the combined total of all the parts* *Accurately identify pairs of numbers with a total of 10* *Represent number bonds to 10* *Understand commutativity of number bonds to 10* *Use positional and directional language to follow and give instructions* *Build, describe and sort common 3D shapes (sphere, cylinder, cone, cube, cuboid)* *Match 3D shapes to their 2D prints* *Name each of these regular 2D shapes, exploring and describing their properties: circle, triangle, square, rectangle*	*big, small, big, small, big, small* *Continue patterns* *Make their own patterns* *Translate or copy patterns from one form to another e.g. from a colour pattern into an action, sound or shape pattern* *Count forwards and backwards between 1 and 10 confidently* *Use a 1–10 number track to count on or count back* *Add or take away numbers using a first, then, now story structure* *Confidently count forwards and backwards to 20* *Accurately count an irregular set of up to 20 objects or resources*	*Show why a number is odd or even* *Identify doubles to double 5* *Explain that even numbers can be shared into two equal groups and odd numbers cannot* *Halve even numbers to 10 by sharing into two equal groups* *Begin to compare two items and learn how balance scales show which item is lighter or heavier* *Describe the weight of objects using everyday language e.g. heavy, light* *Use simple everyday language to compare volume and capacity using the terms full, empty, nearly full and nearly empty in the context of liquids (water) and solids (sand).* *Use the words longer, shorter and taller to compare length.*

				Identify one more and one less than a given number to 20 *Use vocabulary such as more and fewer to compare numbers and quantities*	*Begin to explore non-standard units of measurement.* *Use non-standard units to measure and compare length or height, weight and capacity* *Solve problems involving length or height, weight and capacity*

Italics= Power Maths progression of skills

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.