





 Cardinality and Counting (A)	 Comparison (B)	 Composition (C)	 Pattern (D)	Addition	Subtraction	Multiplication	Division
Nursery	<ul style="list-style-type: none"> Enjoys counting verbally as far as they can go by pointing or touching (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5. Uses some number names and number language within play, and may show fascination with large numbers <i>e.g. Enjoys counting forwards and back (sometimes to much higher numbers). Use different voices, e.g. high or growly.</i> Begin to recognise numerals 0 to 10 Subitises one, two and three objects (without counting) Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle) Links numerals with amounts up to 5 and maybe beyond Explores using a range of their own marks and signs to which they ascribe mathematical meanings 	<ul style="list-style-type: none"> Compares two small groups of up to five objects, saying when there are the same number of objects in each group, e.g. You've got two, I've got two. Same! 	<ul style="list-style-type: none"> Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers Beginning to use understanding of number to solve practical problems in play and meaningful activities Beginning to recognise that each counting number is one more than the one before Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same 	<ul style="list-style-type: none"> Creates their own spatial patterns showing some organisation or regularity Explores and adds to simple linear patterns of two or three repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC) Joins in with simple patterns in sounds, objects, games and stories dance and movement, predicting what comes next 	Throughout the suggested activities, expose children to the following manipulatives in order to support conceptual understanding. Cubes  Numicon  Counters 			

Suggested activities

- (A) Use opportunities within daily routines to support children's developing sense of number.
- (A) Model and encourage counting and representing numbers within role play, *e.g. making a telephone call using a list of numbers.*
- (A) Value children's own mathematical representations within their pretend play.
- (A) When counting with children, playfully make deliberate mistakes for fun, expecting children to correct them.
- (A) Model writing numerals, *e.g. on badges, birthday cards and banners.*
- (A) When counting objects with children emphasise the cardinal principle: 1, 2, 3, there are three cups.
- (A) Invite children to count out a number of things from a larger group, *e.g. Can you get five crackers?*
- (A) Encourage children to use their fingers to show an amount *e.g. when asking another child to share resources, to show on their fingers how many they need.*
- (A) Provide a numeral rich environment, *e.g. in roleplay areas, mud-kitchen recipes, numbers on trikes and toilet doors.*
- (A) Provide numerals that children can pick up and use within all aspects of their play and explore and talk about higher numbers both indoors and outdoors.
- (A) Model using objects to illustrate counting songs, rhymes and number stories, sometimes using pictures and numerals, to enable children to use those resources independently.
- (A) Play with either big dot or numeral dice. Discuss that six on the dice is worth more than four.
- (A) Provide a variety of mathematical picture books.
- (A) Explore different arrangements of the same number, *e.g. partitioning five in different ways; hiding one group and "guessing" the hidden number.*
- (A) Model counting items rhythmically, including objects into a container, claps or drumbeats.
- (A) Support children to choose how to arrange collections of two, three and four objects in different ways.
- (A) Provide spaces to display children's ongoing mathematical thinking, *e.g. their own ways of representing their thinking, and scribing children's words.*
- (C) Model wondering and talking about how you might solve a number problem.
- (C) Value and support children to use their own graphics when problem solving.
- (D) Whilst playing alongside children, model simple repeating patterns of two or three items and encourage children to create and continue patterns.
- (D) Demonstrate arranging objects in spatial patterns when building, collaging or playing with loose parts.
- (D) Draw children's attention to patterns around them including from a range of cultures.
- (D) When making patterns, help children to solve problems.
- (D) Provide a range of items for free exploration of patterning indoors and outdoors including natural materials, pattern blocks, loose parts, mats, trays and strips. • (D) Encourage children to join in with body patterns or repeating sections of songs.
- (D) Pause to encourage prediction when enjoying stories and rhymes with repeating elements, sometimes using props.
- (D) Emphasise the repeating pattern when turn taking.
- (D) Provide patterned resources including those representing a range of cultures, such as clothing, fabrics or wrapping paper.
- Emphasise the one more in rhymes and traditional tales, asking children to predict the next number.
- Emphasise the one less pattern in rhymes and traditional tales, asking children to predict the next number.
- Encourage children to share items between two people or toys