




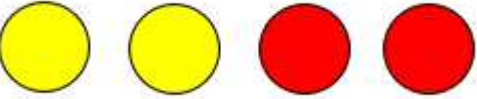
 Cardinality and Counting (A)	 Comparison (B)	 Composition (C)	 Pattern (D)	Addition	Subtraction	Multiplication	Division
Nursery	<ul style="list-style-type: none"> <li>Enjoys counting verbally as far as they can go by pointing or touching (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5.</li> <li>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></li> <li>Begin to recognise numerals 0 to 10</li> <li>Subitises one, two and three objects (without counting)</li> <li>Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle)</li> <li>Links numerals with amounts up to 5 and maybe beyond</li> <li>Explores using a range of their own marks and signs to which they ascribe mathematical meanings</li> </ul>	<ul style="list-style-type: none"> <li>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!</li> </ul>	<ul style="list-style-type: none"> <li>Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers</li> <li>Beginning to use understanding of number to solve practical problems in play and meaningful activities</li> <li>Beginning to recognise that each counting number is one more than the one before</li> <li>Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same</li> </ul>	<ul style="list-style-type: none"> <li>Creates their own spatial patterns showing some organisation or regularity</li> <li>Explores and adds to simple linear patterns of two or three repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC)</li> <li>Joins in with simple patterns in sounds, objects, games and stories dance and movement, predicting what comes next</li> </ul>	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