

Learning Trajectory Cardinality (including subitising)

Range	Unique Child: what a child might be doing	Positive Relationships: what adults might do	Enabling Environments: what adults might provide
1	Reacts to changes of amount when those amounts are significant (more than double).	- Notice and mirror children's reactions to changes in amount. - Use feeding, changing and bathing times for finger-play with young babies	- Provide small groups of the same objects in treasure baskets, as well as single items.
2	May be aware of number names through their enjoyment of action rhymes and songs that relate to numbers. Looks for things which have moved out of sight.	- Take opportunities during play to sing number rhymes. - During personal care routines make a point of using numbers. - Play peek-a-boo hiding games with toys and people.	- Plan to sing number rhymes with actions. - Involve families in sharing number rhymes from home cultures.
3	Uses number words, like <i>one</i> or <i>two</i> and sometimes responds accurately when asked to give one or two things.	- Use number words in meaningful contexts, e.g. <i>Here is your other mitten. Now we have two.</i>	- Play hiding games so children notice that something has gone. - Provide varied sets of objects for playful opportunities for children to independently explore <i>lots</i>, <i>more</i>, <i>not many</i> and <i>not enough</i>. - Count while engaging in everyday tasks and while moving around.
4	In everyday situations, accurately takes or gives two or three objects from a group. Beginning to notice numerals (number symbols). Beginning to count on their fingers.	- Encourage children to explore the collections they make, comparing amounts and counting some of the items, emphasising the last number, e.g. <i>1,2,3. There are 3 leaves.</i> - When singing number rhymes with props, draw attention to contrasting differences and changes in numbers, checking together <i>How many now?</i> Point out the number of things whenever possible, e.g. rather than just <i>chairs</i>, say <i>four chairs</i>. - Encourage children to use marks to represent their mathematical ideas in role play. - Help children to give or get two or three items, e.g. during snack time help children to take two pieces of fruit.	- Provide buckets and bags for children to create collections of objects which they can count. - Provide mark-making materials indoors and outdoors for children to represent their own ideas in play. - Provide opportunities for children to explore cardinality in the environment using self-correcting resources, e.g. jigsaw with two ducks and the number two, or displays showing the numeral and the number of items. - Sing counting songs and rhymes which help to develop children's understanding of number.
5	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.	- Encourage children to share items between two people or toys. - Use opportunities within daily routines to support children's developing sense of number. - Model and encourage counting and representing numbers within role play. - Model writing numerals, e.g. on badges, birthday cards and banners. - When counting objects with children emphasise the cardinal principle: 1, 2, 3, there are three cups. - Invite children to count out a number of things from a larger group e.g. <i>Can you get five crackers?</i> - 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.	- Provide numerals that children can pick up and use within all aspects of their play. - Model using objects to illustrate counting songs, rhymes and number stories, sometimes using pictures and numerals, to enable children to use those resources independently. - Play with either dot or numeral dice. Discuss that six on the dice is worth more than four. - Provide a variety of mathematical picture books and share them as part of 'warm and cuddly' maths times. - Support children to choose how to arrange collections of two, three and four objects in different ways. - Provide spaces to display children's ongoing mathematical thinking, e.g. their own ways of representing their thinking, and scribing children's words.

6	Counts out up to 10 objects from a larger group. Matches the numeral with a group of items to show how many there are (up to 10).	- Model comparing numbers in problems about fair shares. - Encourage cardinal counting by saying how many there are after counting (...6, 7, 8. <i>There are 8 balls</i>). - In everyday activities, ask children to count out a number of things from a group (e.g. <i>Could you get seven cups for snacktime?</i>) - Encourage children to make predictions and visualise the outcome in stories, rhymes and songs if one (or two) is added or taken away. - Talk to children about the marks and signs they use to represent and communicate their thinking. As appropriate, model and discuss informal and standard ways.	- Involve children in voting, e.g. for books to read at story time, using linking cubes with children's names on. - Discuss examples and display large numbers including hundreds, thousands and a million. - Pose everyday estimation problems and establish mental estimation benchmarks, e.g. more or less than 10. - Set up an estimation station where everyone records guesses; later count and order the guesses. - Drop marbles into a tin and ask the children to listen (without looking) to count how many there are. - Provide opportunities for children to match a number of objects to the numeral, including zero and display number lines to 100 at child height. - Provide dice, board and card games, sometimes involving older children, families and members of the local community. - Provide resources to make "staircase" patterns which show that the next counting number includes the previous number plus one. - Display children's mathematical representations, including explanations of the children's meaning making. - Provide resources to make "staircase" patterns which show that the next counting number includes the previous number plus one.
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Reference: Birth to 5 Matters – Non-statutory guidance for the Early Years Foundation Stage www.birthto5matters.org.uk

Key to understanding the age ranges:

