

Approximate developmental progressions for mathematics

Early mathematical learning occurs indoors and outdoors through play and everyday experiences that are meaningful to the child. These experiences are supported by practitioners and families with whom they have warm, secure relationships. Children's mathematical development builds upon their previous experiences so children will continue to learn through and enjoy activities relating to previous stages of development. Ages are approximate with statements describing what children are typically learning to do within that stage so are not expectations of children. All children learn differently but development tends to follow these sequences.

	Counting Children are learning to...	Cardinality Children are learning to...	Measurement Children are learning to...	Pattern Children are learning to...	Shape Children are learning to...	Space Children are learning to...
Under 2s	<ul style="list-style-type: none"> Say number words to 5 (as a string, "onetwothree" or song tune). Sometimes use number or number-like words. 	<ul style="list-style-type: none"> Recognise changes in amount. Respond to familiar number words as relating to a number of things. Sometimes respond to one or two by showing or getting one or two things (although these may not be correct). 	<ul style="list-style-type: none"> Explore items of different sizes. Enjoy filling and emptying containers. Appreciate that things might happen now or at another time. 	<ul style="list-style-type: none"> Enjoy simple patterned songs, rhymes and activities, joining in with repeated actions or sounds. Anticipate what comes next using the pattern of familiar routines. 	<ul style="list-style-type: none"> Explore the shape of objects. Select an object by its shape, sometimes to fit into a particular shaped space. Enjoy putting different shapes on top of each other (sometimes successfully) and taking shapes apart that have been put together. 	<ul style="list-style-type: none"> Indicate where something is or where they would like to go. Push objects through holes and try to make things fit in spaces. Explore the environment and create mental maps of very familiar places.
2 year olds	<ul style="list-style-type: none"> Say the numbers in order to 5 (usually as distinct words but sometimes missing a number). Use counting-like behaviour, pointing/ touching and saying number words (not one-to-one). 	<ul style="list-style-type: none"> Count up to two or perhaps three objects (one at a time). Sometimes subitise a small group of 1, 2 or 3 objects (instantly recognise without counting). Notice numerals in their environment. 	<ul style="list-style-type: none"> Through gesture, words or responses, show attention to size (big, small, tall), weight (heavy) and capacity (full, empty, all gone). Anticipate what comes next in familiar routines (such as home time, after story or handwashing before lunch). 	<ul style="list-style-type: none"> Enjoy patterned songs, rhymes, stories and activities, joining in with repeated actions or phrases, predicting what comes next using the pattern. Arrange objects in their own pattern (such as in a line). 	<ul style="list-style-type: none"> Select an object by its shape for a particular purpose or to fit into a specific space. Recognise that two objects have the same shape. Build towers/stacks or lines of blocks. 	<ul style="list-style-type: none"> Respond to some position and direction words/ gestures to find objects or landmarks in their environment (even when on the move). Move and turn objects if they will not fit. Find their way around familiar environments, navigating around obstacles.
3 year olds	<ul style="list-style-type: none"> Say the numbers in order to 10 and maybe backwards from 10 to 0. Say one number for each item when counting to 5 (one-to-one), perhaps by pointing or touching. Recognise some numerals. 	<ul style="list-style-type: none"> Count up to 5 objects (one at a time). Count out up to 5 objects from a larger group. Subitise a small group of 1, 2, 3 objects (instantly recognise without counting). Link numerals with amounts up to 5. 	<ul style="list-style-type: none"> Compare two items to decide which is the longer/ shorter or heavier/lighter, when there is an obvious difference. Pour from one container to another to compare how much they hold. Sequence a small number of familiar events. 	<ul style="list-style-type: none"> Join in with action patterns in dance, stories, games, etc. Arrange objects in spatial patterns with some organisation or regularity (such as spacing around the middle or in the corners). Copy, create, correct and continue repeating patterns of two repeating elements (AB). 	<ul style="list-style-type: none"> Use own words or gestures to indicate or describe shape properties, such as corners and sides. Recognise two or three familiar shapes (in different sizes and orientations). Use shapes to make pictures. Build simple structures such as walls. 	<ul style="list-style-type: none"> Respond to a range of position and direction words/gestures to find objects or landmarks in their environment, recognising if they are near or far away. Move and turn objects, judging how they will fit. Recognise and predict items or landmarks along familiar routes (indoors and out).
4 years +	<ul style="list-style-type: none"> Say the numbers to 20 and perhaps beyond and backwards to 0. Says one number for each item when counting to 10 (one-to-one), perhaps by pointing or touching. Put numerals in order to 10. 	<ul style="list-style-type: none"> Count up to 10 objects (one at a time). Count out up to 10 objects from a larger group. Subitise a small group of up to 5 objects (for 5 they may see them as 4 and 1 or 3 and 2 but recognise there are 5 without counting). Link numerals to amounts up to 10. 	<ul style="list-style-type: none"> Use direct comparison to find the longer/shorter and heavier/lighter of two items, recognising when they are the same. Fill a container using a smaller container or spoon to see how much it holds. Use a ruler, stick, paper strip or length of string as a measurer to measure the length of two objects and find which is the longer/shorter. Use time words such as yesterday, tomorrow or the days of the week. 	<ul style="list-style-type: none"> Copy, create, correct and continue repeating patterns with three elements. Make the same pattern using different objects (or perhaps body actions or sounds). Make simple repeating patterns that join up as one continuous pattern (circular or border pattern). 	<ul style="list-style-type: none"> Use words or gestures to describe shapes by their properties. Recognise four or more shapes by their properties (including different triangles and rectangles, in a range of orientations). Combine and separate shapes to make new shapes and find shapes within shapes. Build corners, bridges and simple buildings (perhaps with windows or doors) when constructing. 	<ul style="list-style-type: none"> Use relative position to find or describe objects or landmarks in their environment, where it depends on your viewpoint (such as behind or in front of). Follow and give directions. Move, turn and flip objects, judging how they will fit. Mentally keep track of where they are along a route. Use a simple map of a familiar area to find a hidden object.