

# EYFS Maths Curriculum Overview for Number & Numerical Patterns

'Working together to achieve success'



*Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and ten-frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.*

<p style="text-align: center;"><b>Autumn</b> <b>Concrete</b></p>	<p style="text-align: center;"><b>Spring</b> <b>Pictorial</b></p>	<p style="text-align: center;"><b>Summer</b> <b>Abstract</b></p>
<p>Learn number rhymes up to 5 then 10</p> <p>Number of the Week approach for 0-10 which introduces a number each week focusing on:</p> <p>Numeral recognition &amp; begin writing numerals 0-10 Verbal counting forwards &amp; backwards to &amp; from the number &amp; linking to 1 more/1 less &amp; ordering numbers Introducing models &amp; visual aids including fingers, dice, dominoes, ten frames &amp; numicon Counting out this amount e.g. get me 3 dolls Counting what is there + teaching strategies e.g. 1:1 touching or moving objects or lining them up Finding different ways to partition each number including doubles using the part-part whole model &amp; terminology</p> <p>Understand the concept of addition by practically combining sets of objects – link to number of the week</p> <p>Understand the concept of subtraction by practically removing one amount from another – link to number of the week</p>	<p>Return to 0-10 deepening understanding through linking concrete experiences to pictorial</p> <p>Number recognition to 20 &amp; begin writing 11-20 Ordering numbers to 10</p> <p>Understand that teens numbers are a group of 10 plus another amount – look for repeating patterns in the counting sequence: 6, 7, 8...16, 17, 18...26, 27, 28</p> <p>Recording in their own ways number bonds up to 5 then 10 &amp; related subtraction through pictorial addition &amp; subtraction number stories Relate subtraction to addition in practical/pictorial contexts</p>	<p>Return to 0-10 deepening understanding through linking concrete &amp; pictorial experiences to abstract knowledge</p> <p>Writing numerals to 20 Ordering numbers to 20 Identify one more and one less than given numbers</p> <p>Singing songs &amp; playing games that involve recalling number bonds up to 5/10 &amp; related subtraction facts &amp; double facts</p> <p>Inventing &amp; responding to oral number stories involving number bonds to 5/10 &amp; related subtraction Add &amp; subtract single digit quantities up to 10 and then greater than 10, using practical equipment</p>

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<p>Intro doubles for each number up to 5 – begin to understand the concept of adding the same number to itself</p> <p>Sharing each quantity between 2 – is it fair? Understand sharing into equal parts and halving as 2 equal parts</p> <p>Subitising up to 5 Comparing quantities Begin verbal counting to 20 Counting back from 10</p>	<p>Doubling – understanding the concept &amp; begin to learn the facts to 5+5</p> <p>Sharing/ Investigating odd &amp; even quantities</p> <p>Subitising up to 5 Comparing quantities Verbal counting to 20 Begin counting back from 20 to 0</p>	<p>Doubling – recall facts</p> <p>Finding half/Investigating odd &amp; even quantities – explore &amp; represent the patterns in odd &amp; even numbers</p> <p>Subitising up to 5 Comparing quantities Verbal counting beyond 20 Counting back from 20 to 0</p>
<p><b>Early Learning Goal for Number</b></p> <ul style="list-style-type: none"> <li>• Have a deep understanding of number to 10, including the composition of each number</li> <li>• Subitise up to 5</li> <li>• Automatically recall number bonds up to 5 (including subtraction facts) &amp; some number bonds to 10, including double facts</li> </ul>	<p><b>Early Learning Goal for Numerical Patterns</b></p> <ul style="list-style-type: none"> <li>• Verbally count beyond 20, recognising the pattern of the counting system</li> <li>• Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity</li> <li>• Explore &amp; represent patterns within numbers up to 10, including evens &amp; odds, double facts &amp; how quantities can be distributed equally</li> </ul>	

<https://mathsnoproblem.com/en/approach/concrete-pictorial-abstract/>


## The CPA Approach



CONCRETE -  
using physical objects  
to solve maths problems.



PICTORIAL -  
using drawings  
to solve maths problems.



ABSTRACT -  
solving maths problems  
using only numbers.

### What is the Concrete Pictorial Abstract in Maths?

The Concrete Pictorial Abstract (CPA) approach is a system of learning that uses physical and visual aids to build a child's understanding of abstract topics.

Pupils are introduced to a new mathematical concept through the use of **concrete** resources (e.g. fruit, Dienes blocks etc). When they are comfortable solving problems with physical aids, they are given problems with pictures – usually **pictorial representations** of the concrete objects they were using.

Then they are asked to solve problems where they only have the **abstract** i.e. numbers or other symbols. Building these steps over time can help pupils better understand the relationship between numbers and the real world, and therefore helps secure their understanding of the mathematical concept they are learning.