

Welcome to Maths in EYFS

1 2 3 4 5 6
7 8 9 10

The Early Learning Goal is the expected level at the end of the Reception year.

Early Learning Goals:

- children count reliably with numbers from one to 20
- children place numbers in order up to 20
- children can say which number is one more or one less than a given number
- using quantities and objects, children add and subtract two single digit numbers and count on or back to find the answer
- children solve problems, including doubling, halving and sharing

This sounds like an enormous task, especially when we have to consider how young our children are and what an abstract concept number can actually be. What do the digits represent? What is 5? What is 12?

How can young children deepen their understanding enough to support their future learning? These are the foundation years and we need to make sure that we get this right from the very beginning. To get more of an idea how confusing this can be, we are going to try something different to try and understand what it is like from a child's point of view!

To begin, we need to substitute numbers for letters so $1=a$ $2=b$ $3=c$ etc.

Can you to answer the following:

$$i + f =$$

Did you find yourself using your fingers? You will see young children doing this all the time!

So, we find ourselves in a position where even before we try to get them to understand the digits, we need to them understand the 'shape' of the number. This is where Numicom comes in! Let us have a look at this introduction to how Numicon is used by clicking on the link below.

<https://www.bing.com/videos/search?q=introduction+to+numicon&&view=detail&mid=714BBA5E6465523C4A8D714BBA5E6465523C4A8D&&FORM=VRDGAR&ru=%2Fvideos%2Fsearch%3Fq%3Dintroduction%2520to%2520numicon%26qs%3DAS%26form%3DQBVR%26sp%3D1%26ghc%3D1%26pq%3Dintroduction%2520to%2520numi%26sc%3D8-20%26cvid%3D89A1499136B2402381B27F5351636FCF>

Using Numicom Firm Foundations Kit to aid the understanding of number

Numicom is freely available for children to explore in their play. Children are encouraged to look for Numicom shapes in the sand tray and fish for them in water play.



The matching of shapes to baseboards is offered as an independent activity.

Visualising the properties of the shapes in a feely bag, helps children develop their own mental imagery of number.



'Concept images' help children to 'visualise' the number and practically compare numbers through play as well as direct teaching. These include: Numicom shapes; a position on a number line; a numeral; a word; images using random arrangements for the number; counting experiences; 'everyday life' interpretations.



five

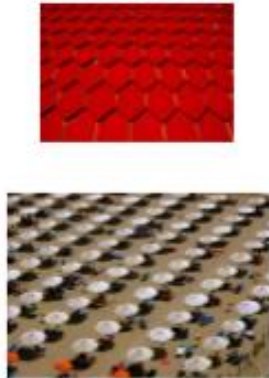


Once the children are familiar with the plates and the 'shape' of the numbers, we can get them to begin to understand how this relates to the digit.

For example, during a Maths session a child asked what eleven looked like. Another child said 'eleven is a one and a one'. I then took two of the one plates out of the box and we decided that one and one is actually two! We then discussed that eleven is one ten and one one. Although this place value is a tricky concept, we must ensure that we are giving the children the correct information from the very beginning as early misconceptions can cause problems with their later understanding.

Recognising patterns, Ordering numbers, Comparing numbers and Counting

Children are encouraged to recognise, make and predict patterns.



The most important regularity in numbers is their order.



Children should be encouraged to count collections at every opportunity, noticing that the final number they arrive at describes how many objects there are in the collection.



Moving beyond counting

It is through counting activities that children begin to develop their early understanding of numbers. When calculating, however, numbers must be conceived as a 'whole', i.e. 'four' is not the chain 'one-two-three-four', it is a 'whole' itself.

Children use Numicon shape patterns to see that 'four' looks like 'one less than five', 'one more than three', and 'two twos'. Seeing these relationships are the foundations for calculation.



When asking children 'how many?', children should be taught to count in ones and group in tens; this introduces the idea of place value. Therefore 'seventeen' is expressed as 'one ten and seven (ones)'.



Addition of numbers

There are two types of addition situations:

Here quantities are added together:



Here 'something more' is added:



Subtraction of numbers

Subtraction involves four different kinds of situation.

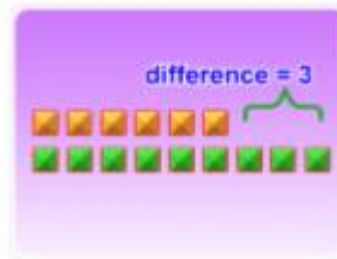
Taking away (a loss):



Taking away ('decrease'):



Comparison (finding the difference):



Keep adding to reach a target:

How many jumps from 5 to reach 8?



How many more to get to 7 from 4?



Multiplying & Dividing numbers

Children need to solve problems involving doubling, halving and sharing.

Doubling:



Halving:



Sharing:



The idea of comparison is the basis of all forms of measurement.



Which snake is the **shortest**?



Things to try at home:

- singing – repeating the language over and over again ensures that it becomes embedded.
- Counting on and back but not always starting at the same point.
- 1:1 correspondence – ensuring that children become confident with one object = one number. This is extremely important when adding and subtracting.
- Sharing – can they share out objects? Practise this with sweets, toys etc.
- Cutting food in half then quarters as this language will enable their understanding of not only shape but in number too.
- Looking at numbers within their own environment. Door numbers, prices, buses and number plates will all support their recognition and confidence.