

EYFS Addition

Key Vocabulary

Plus, estimate, add, more, and, sum, total, make, altogether, score, double, one more, two more, three more, how many more make, how many more is, same as, subitising

Guidance/Models/Images

Counting objects, partitioning and recombining sets using practical apparatus.

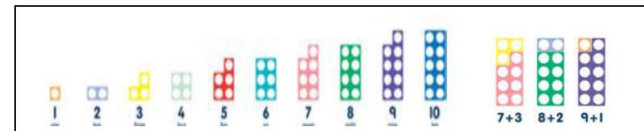
Understand that the number gets bigger.

Addition is commutative.

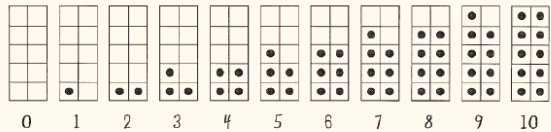
Use number tracks to develop counting skills, forwards and backwards.

Numicon shapes, ten frame and bar model should be used to introduced straight away and be used to:

- identify (1 more/less)
- combine (pieces to add)
- find (number bonds)
- add (without counting)

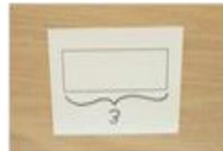
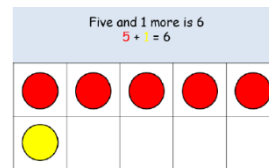


Ten-frame tiles show a unique picture for each number. By showing each quantity in relation to 10, they provide foundation for place-value concepts. The ten-frame model shows 0. It also shows the attributes of odd and even.



subitising

Children can record this by printing or drawing around Numicon pieces / ten frame



Children combine sets of objects using concrete apparatus

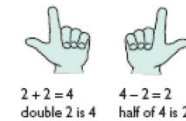
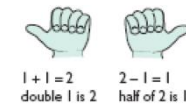


Construct number sentences verbally or using cards with practical activities



Children are encouraged to read number sentences aloud in different ways. "Three add two equals 5". "5 is equal to three and two". "5 is the same as three and two".

Children make a record in pictures, words or symbols of addition activities.



●●●●●	$0 + 5 = 5$
●●●●●	$1 + \square = 5$
●●●●●	$2 + \square = 5$
●●●●●	$3 + \square = 5$
●●●●●	$4 + \square = 5$
●●●●●	$5 + \square = 5$

Pattern spotting encouraged:

Teacher modelling of number sentences and addition as commutative

Once numbers can be written, number sentences can be recorded.

Modelling of commutative layout.

To have experience of '=' sign as last stage in calculation.

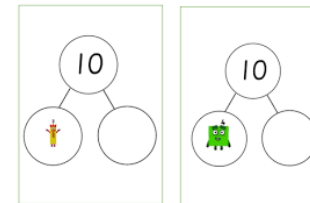
Number tracks can be introduced to count up on and to find one more:

What is 1 more than 4? 1 more than 13?

1	2	3	4	5	6
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Number lines can be used alongside number tracks and practical apparatus to solve addition calculations and word problems

Children encouraged to use part part whole models to describe relationship between numbers as well as building them. Children have opportunities to use concrete materials and pictures before moving onto abstract representations.



Children will need opportunities to look at and talk about different models and images as they move between representations.

## EYFS Subtraction

## Key vocabulary

Take, estimate, leave, how many are left, how many have gone, one less two less three less, fewer, difference between, the same as

Know that the number gets smaller because objects have been removed from the set.

## Practical models of subtraction



Counting back on fingers, orally, number lines.

(To be used for lots of oral examples).

Children begin with mostly pictorial representations or real contexts.

Concrete apparatus is used to relate subtraction to taking away and counting how many objects are left. Practical demonstrations of take away. Concrete apparatus models the subtraction of 2 objects from a set of 5.



There were 9 balloons. Two popped. How many are left?



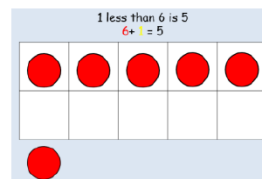
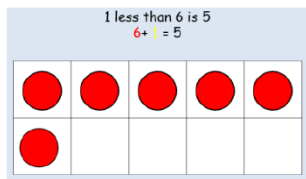
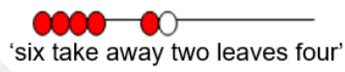
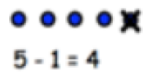
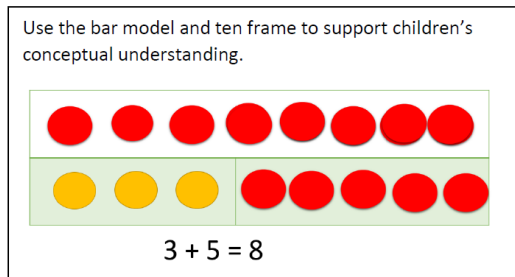
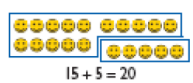
Construct number sentences verbally or using cards to go with practical activities.

Children are encouraged to read sentences aloud in different ways.

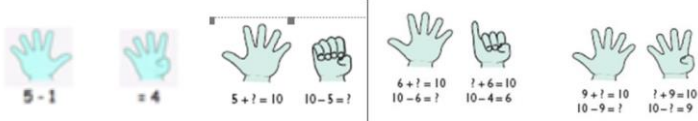
“ Five subtract one leaves four”. “ Four is equal to five subtract one.” “Four is the same as five subtract one.”

Use the bar model and ten frame to support children’s conceptual understanding.

Children make a record in picture, words or symbols of the subtraction activities.

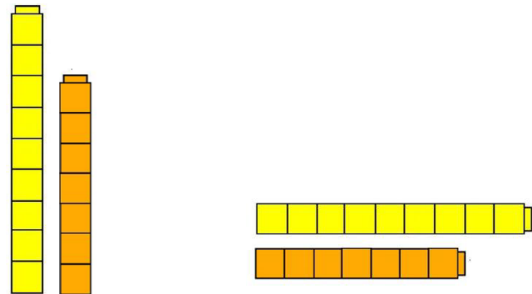


Solve simple problems using fingers:

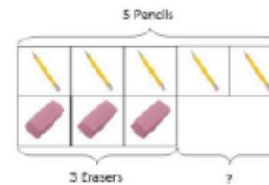


Number lines can then be used alongside number tracks and practical manipulatives to solve calculation problems

Finding the difference



Let's find the difference between 9 and 7  
 $9 - 7 =$    How many more do I add to 7 to get to 9?  
 Use basic bar models with images to find the difference

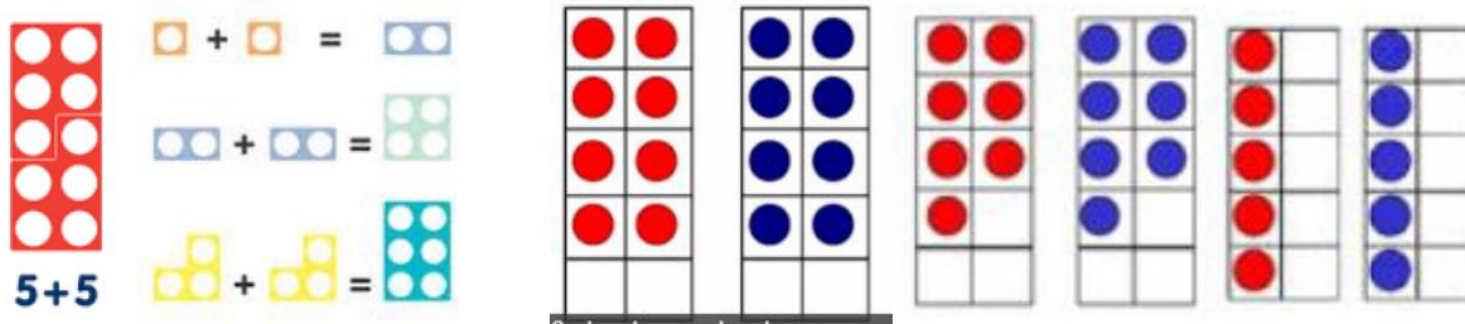


EYFS Multiplication

Key Vocabulary

Lots of, groups of, times, multiply, multiplied by, multiple of, once twice three times four times, .....times as big as....(wide/long/wide), repeated addition, double, estimate, add again and again,

The link between addition and multiplication can be introduced through doubling.  
 Ten frame, numicon and unifix should be used to visualise the repeated adding of the same number.  
 These can be drawn around or printed as a way of recording.



Children exposed to mostly pictorial representations:



How many groups of 2 are there?  $2 + 2 + 2 + 2 + 2$  5 groups of 2

Real life contexts:



How many wheels are there altogether?



How much money do I have?



Count in 2s, 5s, 10s with and without objects




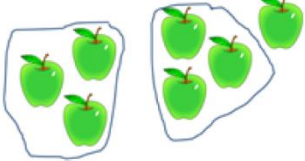
How many fingers on two hands?

How many legs on four ducks?

Children encouraged to read number sentences in different ways

“five times two makes ten” “ten is equal to five times two” “ten is the same as five lots of two”



EYFS Division	
<p>Key Vocabulary</p> <p>Halve, share, share equally, one each two each three each, groups in pairs three, groups of, divide, divided by, left, left over, estimate, fraction, whole, quarter</p>	
<p>Children to solve problems including doubling, halving and sharing.</p> <p>Children need to see/hear representations of division both grouping and sharing.</p> <p>Division can be introduced through halving.</p> <p>Children start with real life pictorial contexts:</p>	
<p>Mum has 6 socks. She grouped them into pairs – how many pairs did she make? How many socks did she have altogether?</p>	
<p>Sharing model: I have 10 sweets. I want to share them with my friend. How many will we get each?</p> <p>Sharing model is useful way of introducing young children to fractions and calculating with fractions although not explicit within Development Matters document.</p>	
<p>Can I share my pizza between two people?</p>	<div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 20px;">  </div> <div style="margin-right: 20px;"> <p>7 apples shared between 2 people.</p>  </div> <div style="border: 1px solid black; padding: 5px;"> <p>3 and a half apples each.</p> </div> </div>