

Studfall Infant Academy and Nursery. EYFS Calculation Policy – September 2021

EYFS addition

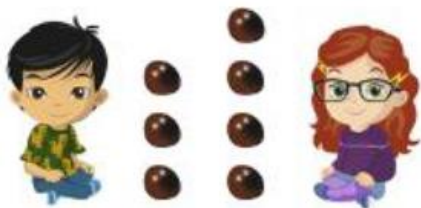
Before addition can be introduced, children in Early Years need to build on concepts taught in Nursery by working through the number objectives in the 40 – 60 month band of Early Years Outcomes. Children need to have a secure knowledge of number in order to begin addition.

Children are then introduced to the concept of addition through practical games and activities. Children act out addition calculations to physically add two groups of objects together and use arm gestures to represent the signs + and =. This is re-enforced by opportunities provided in the outdoor area for the children to use addition e.g. adding together groups of building blocks, twigs etc. Children build on their previous knowledge of 'more' by learning that adding two groups of objects together gives them a larger number (more objects). Adults model addition vocabulary supported by age appropriate definition. An example of this is "addition means we add two groups together / we put 2 lots of objects together." Equals means we find out how many we have got altogether. 3 add 2 equals 5! We have got 5 altogether". In Reception, children are encouraged to record their findings in their own way. This may include writing number sentences e.g. $3 + 4 = 7$, however this is not a requirement until Year 1.

Concrete

Counting and adding more

Children add more person or objects to a group to find one more



One more than 3 is 4

Pictorial

Counting and adding more

Children add one more cube or counter to a group to represent one more

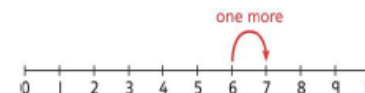


One more than 4 is 5.

Abstract

Counting and adding more

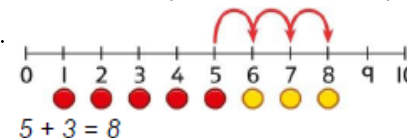
Use a number line to understand how to link counting on with finding one more.


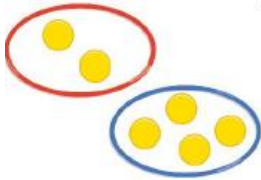
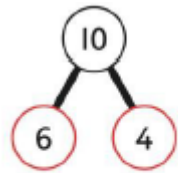



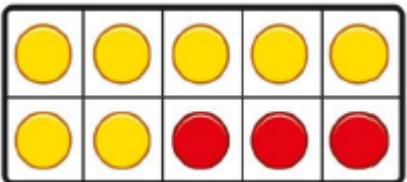

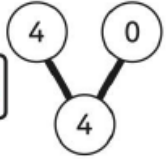
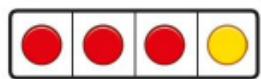
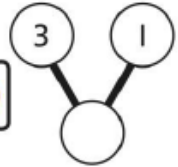


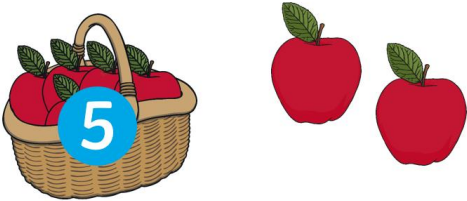

One more than 6 is 7.

7 is one more than 6.

Learn to link counting on with adding more than one.



Concrete	Pictorial	Abstract
<p><u>Understanding part whole relationship.</u></p> <p>Sort people and objects into parts and understand the relationship with the whole.</p>  <p>The parts are 2 and 4. The whole is 6.</p>	<p><u>Understanding part whole relationship.</u></p> <p>Children draw to represent the parts and understand the relationship with the whole.</p>  <p>The parts are 1 and 5. The whole is 6.</p>	<p><u>Understanding part whole relationship.</u></p> <p>Use a part-whole model to represent the numbers.</p>  $\boxed{6} + \boxed{4} = \boxed{10}$ $6 + 4 = 10$
<p><u>Knowing and finding number bonds within 10.</u></p> <p>Break apart a group and put back together to find and form number bonds.</p>  $3 + 4 = 7$  $6 = 2 + 4$	<p><u>Knowing and finding number bonds within 10.</u></p> <p>Use five and ten frames to represent some number bonds.</p>  $4 + 1 = 5$  $10 = 7 + 3$	<p><u>Knowing and finding number bonds within 10.</u></p> <p>Use a part-whole model alongside other representations to find number bonds. Make sure to include examples where one of the parts is zero.</p>  $4 + 0 = 4$   $3 + 1 = 4$ 

Concrete	Pictorial	Abstract
<p>Adding by counting on Children use knowledge of counting to 10 to find a total by counting on using people or objects. <u>Children to start at the largest number</u></p> <div data-bbox="120 434 584 632">  </div> <p>There are 5 apples in the basket ... 6, 7 There are 7 apples altogether,</p>	<p>Adding by counting on Children to use counters/practical resources to support and represent their counting on strategy</p> <div data-bbox="696 449 1228 552">  </div> <p>7 + 5 = Put 7 in my head and then use 5 counters to count on 8, 9, 10, 11, 12 The answer is 12</p>	

EYFS Subtraction

Before subtraction can be introduced, children in Early Years build on concepts taught in Nursery by working through the number objectives in the 40 – 60 month band of Early Years Outcomes. Children need to have a secure knowledge of number in order to begin subtraction. Children are then introduced to the concept of subtraction through practical games and activities. Children act out subtractions to physically subtract a number of objects from a group. Children use arm gestures to represent the signs - and =. This is reinforced by opportunities provided in the outdoor area for the children to count e.g. counting building blocks, twigs etc. Children build on their previous knowledge of 'less' by learning that subtracting means taking away a certain number of objects from a group (leaving them with less objects). Adults model subtraction vocabulary supported by age appropriate definition. An example of this is "subtraction means we take away objects from a group / we have got 5 fewer objects now." Equals means we find out how many we have got left. Wow! We have only got 3 left!" In Reception, children are encouraged to record their findings in their own way. This may include writing number sentences e.g. $5 - 2 = 3$, however this is not a requirement until Year 1.

Concrete

Comparing groups

Children line up objects to compare the amount. They can line the objects up either horizontally or vertically.



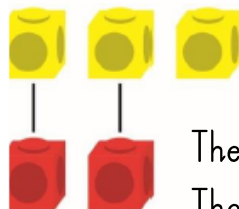
Pam has more conkers.

Bob has fewer counters.

Pictorial

Comparing groups


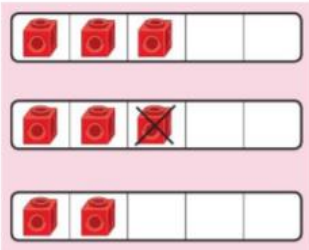

Children line up cubes or counters to compare the amount in each group. Lines can be either horizontal or vertical. A starting line helps to line the objects accurately.

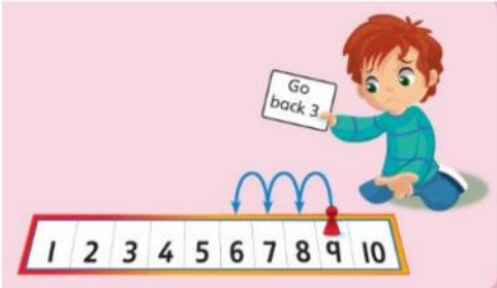
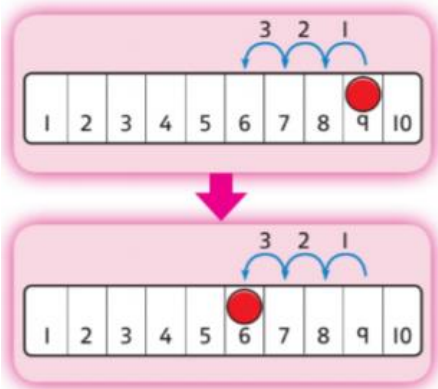


There are more yellow cubes.

There are fewer red cubes.

Abstract

Concrete	Pictorial	Abstract
<p><u>Counting back and taking away</u></p> <p>Children arrange objects and remove to find out how many are left.</p>  <p>1 less than 6 is 5 6 subtract 1 is 5 6 take away 1 is 5</p>	<p><u>Counting back and taking away</u></p> <p>Children use five/tens frames and objects to make a number. They then remove or cross out one object to find one less.</p>  <p>One less than three is two.</p>	
<p><u>Find a missing part, given a whole and a part.</u></p> <p>Children separate a whole into parts and understand how one part can be found by subtraction.</p>  <p>I have 8 cars. I can put 5 in one circle and I can put 3 in another.</p>		

Concrete	Pictorial	Abstract
<p><u>Counting back and taking away (number track)</u></p> <p>Children use game boards and human number tracks to subtract by counting back</p>  <p>9 take away 3 equals 6 9...8...7...6</p>	<p>Counting back and taking away (number track)</p> <p>Children use a number track and a counter. They start at the larger number and count back the smaller number to find the answer.</p>  <p>9 take away 3 equals 6 9...8...7...6</p>	

EYFS Multiplication

By the end of Early Years, children are expected to understand the concept of doubling and to be able to double a number up to a total of 10. Before doubling can be introduced, children need to have a secure knowledge of counting, number facts and addition in order to double. Children are then introduced to the concept of doubling through practical games and activities, including the use of the outdoor areas.

Children act out 'doubling' by physically adding two equal groups together to find out the 'doubles' answer.

Concrete

Making doubles.

Children explore doubles in their environment including games on e.g. dominoes, dice and mirrors.

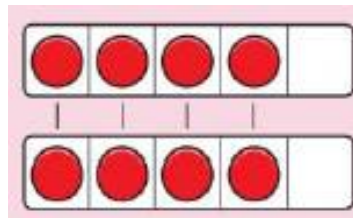
The focus on the understanding of doubles being 2 equal groups.



Pictorial

Making doubles

Children use five frames to find doubles by lining up counters or cubes



Double 4 is 8



Abstract

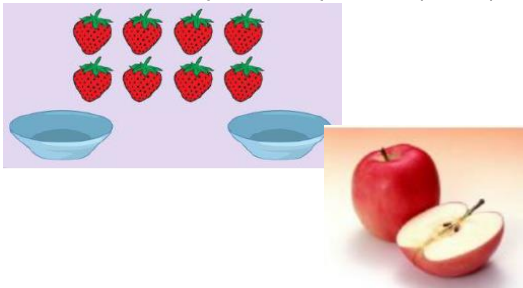
EYFS division

By the end of Early Years, children are expected to understand the concept of halving and sharing. Before this can be introduced, children need to have a secure knowledge of counting backwards, number facts and subtraction in order to halve and share. Children are then introduced to the concept of halving and sharing through practical games and activities. They act out 'halving and sharing' through activities such as e.g. sharing food for their Teddy Bear's Picnic, sharing resources equally to play a game. This is reinforced by opportunities provided in the outdoor area for the children to halve and share out objects such as building blocks, twigs etc.

Concrete

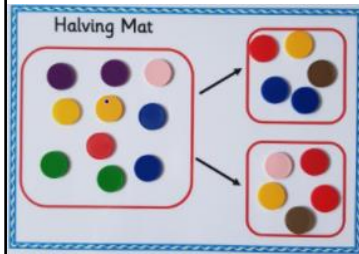
Halving and sharing

Children explore halving and sharing through practical sharing using real life scenarios including sharing real life objects



Pictorial

Hearing and being exposed to language to describe half and seeing visual representatives.



Sharing
equally –
one for me,
one for
you.

Abstract