



## Nursery Maths Calculation Guidance



This document has been created with reference to the Mathematics Mastery Progression document. It has also been written following the production of a Progression of Calculation guidance from Reception to Year 6 for the Aylsham Learning Federation.

It aims to provide guidance and ensure consistency in how children are taught to approach the four calculations. This guidance is provided for Nursery with the understanding that their focus is on the understanding of early number concepts and number sense through the use of concrete manipulatives.

If children are deemed to be exceeding Nursery Early Years expectations, then they should not be moved onto a higher year group content but should be guided to focus on the dimensions of depth.

## Aims of the document

The Progression in Calculation document aims to:

- Ensure all pupils have the potential to succeed when teaching using a mastery approach.
- Ensure pupils are equipped with the necessary calculation skills for their age.
- Develop teachers' understanding of how and when to introduce children to various representations to calculate with the four operations.
- Ensure that teachers know how to support children who may not yet be at their age related expectation .
- Equip pupils with the understanding of how to use particular representations and manipulatives to calculate without formal methods and to reveal structure.
- Promote the use of concrete manipulatives for calculations and demonstrate how these can be used.
- Ensure children are able to explain their use of concrete manipulatives.
- Ensure a smooth transition between Nursery and Reception.

# Core Representations

Fives Frame

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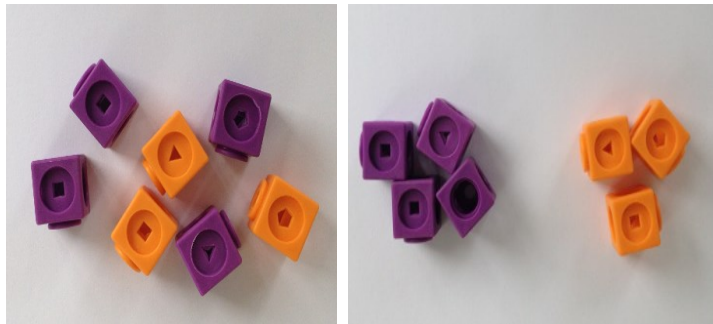
Tens Frame


# Core Manipulatives

## Sorting objects



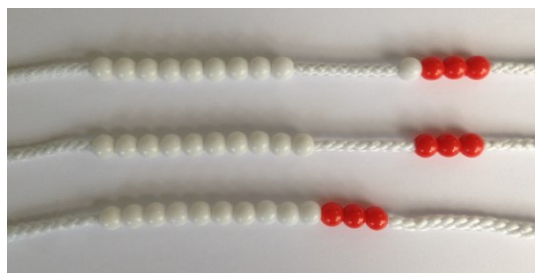
## Cubes



## Buttons used as counters



## Bead Strings



## Rationale

### Nursery– Early Years

In Nursery the focus will be on the understanding of early number concepts and number sense.

There will be an emphasis on using concrete manipulatives, songs and 'Big Pictures' to develop this understanding. Key vocabulary will be introduced.

By the end of Nursery children will have used objects and five frames to support their counting and number sense.

They will learn to use one-to-one correspondence and count all strategies.

They will be introduced to the concepts of grouping and sharing to develop their early understanding of multiplication and division.

The continuous provision opportunities will allow them to explore maths and develop their understanding further.

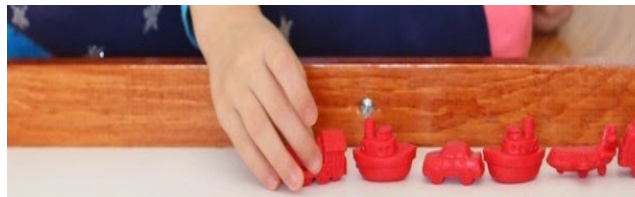
# Addition

N

Adding objects up to 5

## Count all

Counting all objects using one-to-one correspondence and knowing that the last number reached when counting is the total.



## Subitising

Knowing the recognition of up to three objects, without having to count them individually.



# Subtraction



Subtracting numbers under 5

## Taking away from the ones

When this is introduced, the concrete representation should be used so the pupils have a set of objects and take away part of that set. Understanding if we take one away we have fewer.



# Multiplication

N

## Making 2 equal groups

Pupils should become familiar with making comparison between two groups.





# Division

N

## Sharing objects into 2 groups

Pupils should become familiar with sharing objects into two groups through working practically.

