

# Mathematics

28<sup>th</sup> January 2019

# Introduction

The teaching of Mathematics in the Early Years Foundation Stage (EYFS) is made up of the two areas:

- ❖ Numbers
- ❖ Shape, Space and Measures

# By the end of Reception MOST children will be able to...

## Number

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

## Shape, Space and Measure

- Use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems.
- They recognise, create and describe patterns.
- They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

# Number

- Secure foundations in learning about numbers are essential if children are to succeed in Mathematics.
- Counting is a significant aspect of children's early understanding of number and is the foundation on which quantifying (expressing something in numbers) and calculating are built.
- Children need to engage with numbers and see how they can be used in their everyday environment for labelling, quantifying and calculating.



1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
	0	✕



# Your children are being taught to...

- Show an interest in numbers in the environment
- Count a variety of objects including those that cannot be moved, counting sounds and actions
- Count out objects from a larger group with 1:1 correspondence
- Match numbers to quantities correctly
- Represent numbers in different ways
- Compare groups of objects and use words like the same, more and fewer to describe them
- Estimate the number for a groups of objects
- Share groups of objects in different ways
- Say, read, write and order numbers

## Taught to calculate by learning how to...

- Find one more and one less than numbers
- Find the total of two groups of objects by counting all of them
- Subtract from a group of objects and say how many are left
- Use the correct mathematical vocabulary for addition and subtraction
- Use objects and quantities to add and subtract two single digit numbers
- Solve problems using addition and subtraction
- Recording their calculations, talk about their own work and explain
- Add by counting on and subtract by counting back to find the answer
- Solve doubling, halving and sharing problems

# Vocabulary

## Number

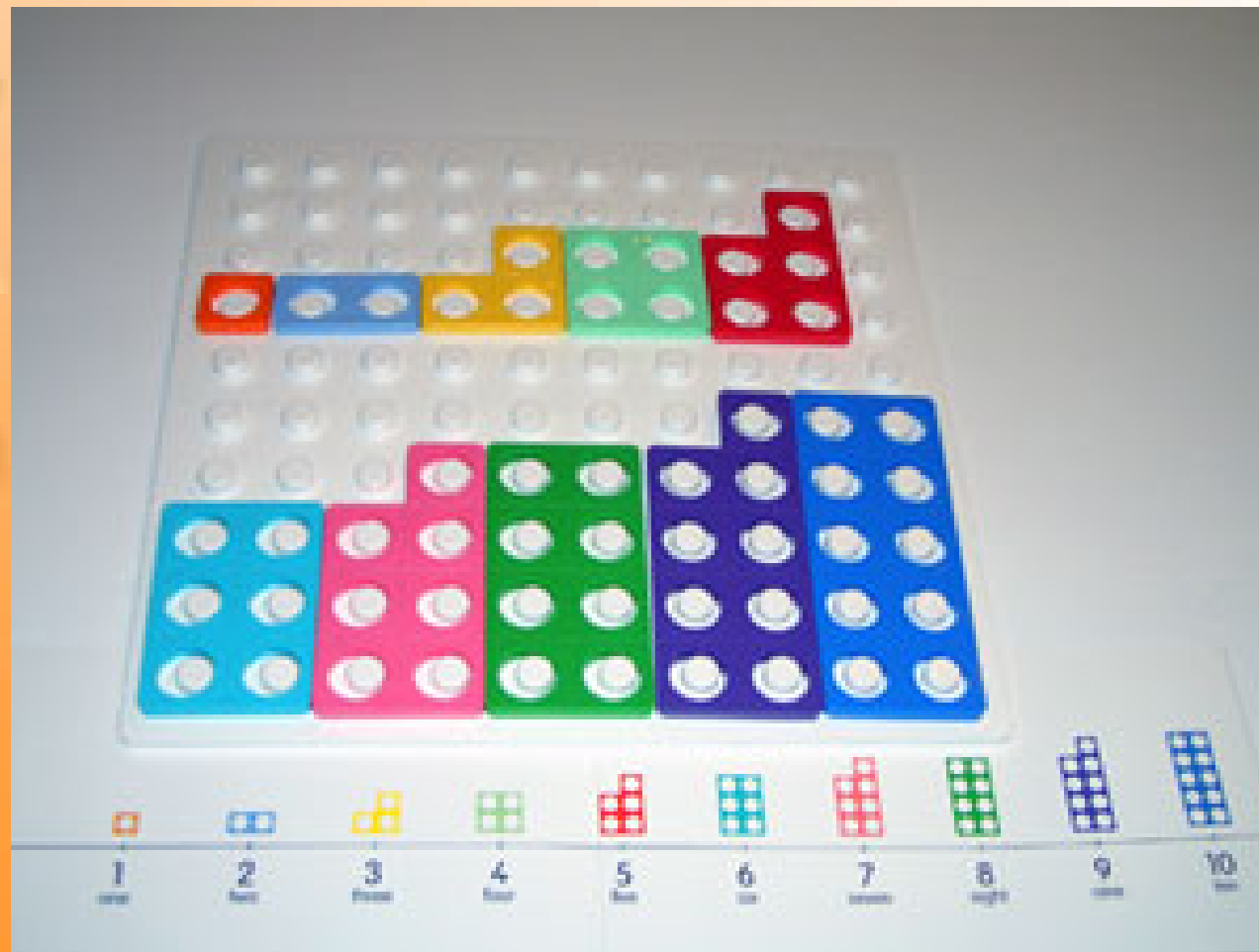
- how many...?
- count, count (up) to
- count on (from, to)
- count back (from, to)
- more, less, fewer, many,
- odd, even
- how many times?
- pattern
- pair
- guess how many
- estimate
- the same number as
- as many as
- more than, less than, fewer than
- bigger than, smaller than
- most, highest,
- least, fewest, smallest
- first, second, third... tenth
- last, last but one
- before, after, next, between
- above, below



# Vocabulary

- add, more, and, makes, sum, total, altogether, addition, plus
- one more, two more, ten more...
- how many more to make... ?
- how many more is... than...?
- take away, subtract, minus, subtraction
- how many are left/left over?
- how many have gone?
- one less, two less... ten less...
- how many fewer is... than...?
- What is the difference between...?
- is the same as, equals, makes, leaves

# Numicon



# Numicon

This resource can help by...

- Providing a visual representation of numbers
- Representing single-digit numbers for adding
- Showing the difference between two single-digit numbers for subtracting
- Stacking Numicon or fitting Numicon pieces together to find different ways of making a number
- Showing how numbers between ten and ninety-nine are made up of tens and ones
- Showing how to add two-digit numbers by combining the tens and ones from each number
- Providing a visual representation to show multiplication

# Real-Life Story, Real Story, Maths Story

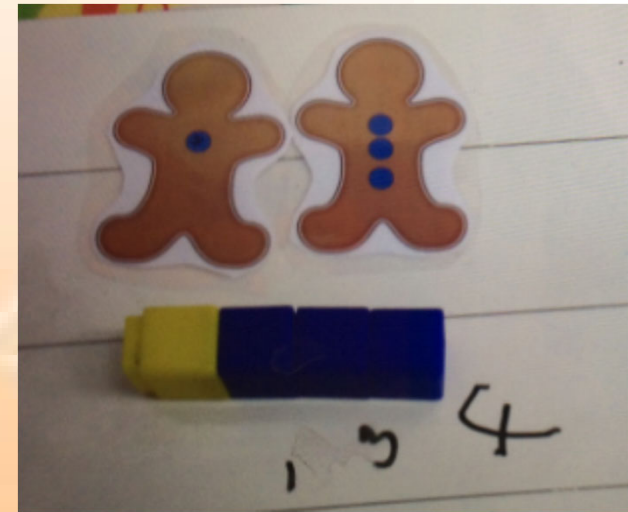
The **real-life story** is a way of representing Mathematics in a real-life situation.

The **real story** is a way of using familiar classroom objects e.g. counters, blocks, pebbles, beads or Numicon to represent the real-life story.

The **Maths story** is a way of representing the Mathematics in the real-life story and the real story using mathematical signs and symbols.

# Real-Life Story, Real Story and the Maths Story

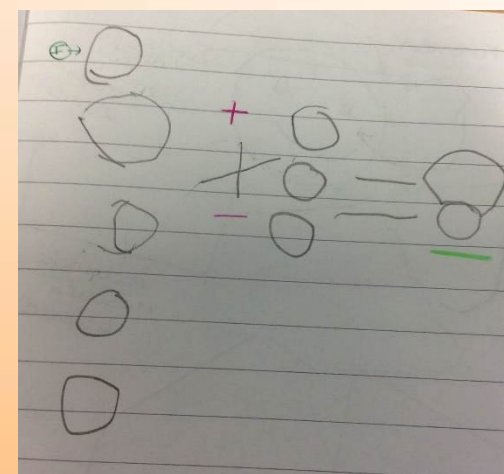
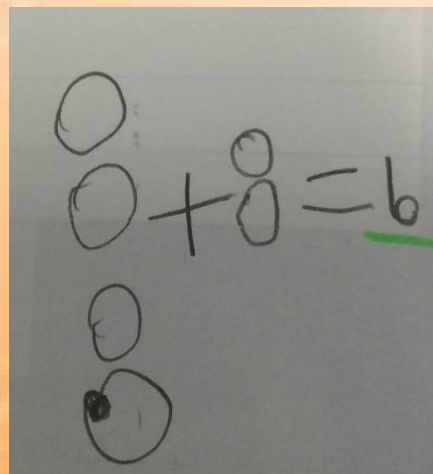
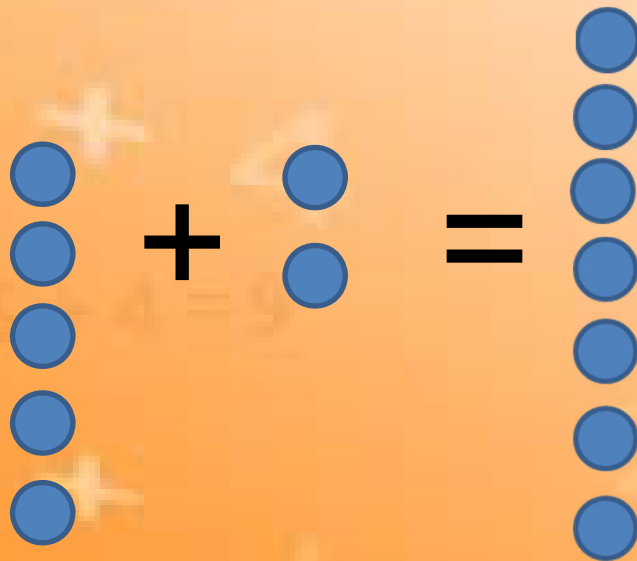
One gingerbread man has one button, the other gingerbread man has three buttons. How many buttons are there altogether?



Three buttons on one gingerbread man and two buttons on the other gingerbread man. How many buttons are there altogether?

# Real-Life Story, Real Story and the Maths Story

## An Example of A Real Story



What could the real-life story be?

What is the Maths story?

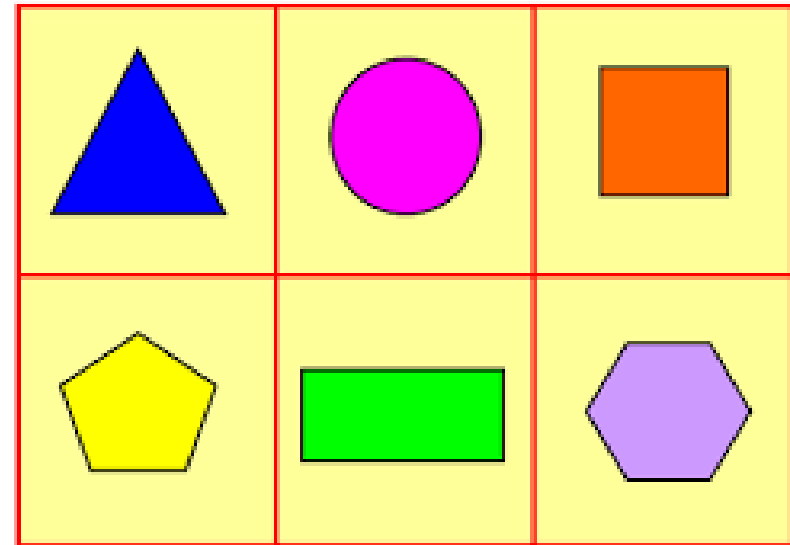
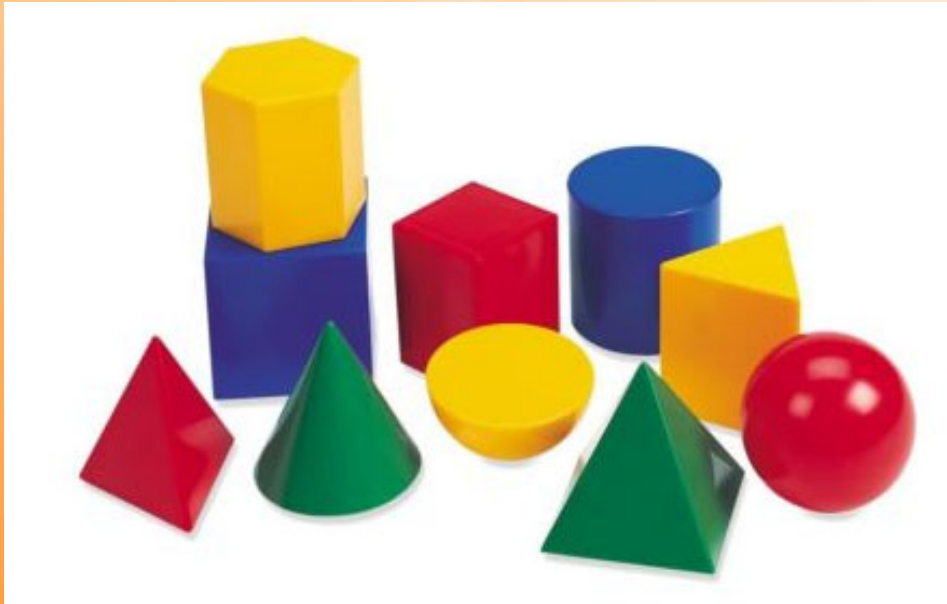
How could Numicon help?

# The Importance of the Real Story

The consistent use of concrete objects enables pupils to visualise both the real-life story and the Maths story.

The real story carries the meaning between the Real-life story and the Maths story.

# Shape, Space & Measure



What is the difference between these two groups of shapes?



# Vocabulary

- Measure
- Mass
- Capacity
- Length, height, distance
- Time
- Shape
- Pattern
- Position, direction and movement

# Keep Maths Practical and Fun

- Bath-Time e.g. filling and emptying containers, counting
- Counting rhymes/number rhymes
- Talk about numbers when out and about e.g. front door numbers, number plates, road signs, supermarket labels etc.
- Cooking e.g. measuring liquids, weighing, following the order of a recipe
- Setting the table e.g. How many more plates/cups do we need?
- Paying in shops, totalling cost and working out change from different amounts of money
- Estimating amounts e.g. How many sweets in a bag of Haribo?
- Play number games e.g. Top Trumps

**Think - real-life usage of mathematics**

# Supporting the teaching of Mathematics

## Websites

<http://nrich.maths.org/early-years>

<http://www.ictgames.com>

<http://www.topmarks.co.uk/>

[http://www.bbc.co.uk/schools/websites/4\\_11/site/numeracy.shtml](http://www.bbc.co.uk/schools/websites/4_11/site/numeracy.shtml)

# Questions

If you have thought of a question, chances are someone else in the room has too.

# How Can We Help You?