



# Maths Workshop Reception

Mrs Morris



# Agenda

Curriculum

Vocabulary

Planning

How to help at home

Lesson & activity



# Introduction

We are here today to help with your understanding of how we teach maths in school, so that you can help support your children at home to become confident and happy mathematicians.

The thinking behind how we teach maths has changed over the years and it has become more about seeing the maths rather than just following rules to complete calculations. Which helps when mistakes are made.





EYFS

# Mathematics

Developing a strong grounding in **number** is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to **count confidently**, develop a **deep understanding** of the **numbers to 10**, the **relationships** between them and the **patterns** within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using **manipulatives**, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their **spatial reasoning** skills across all areas of mathematics including shape, space and measures. It is important that children develop **positive attitudes** and interests in mathematics, look for patterns and relationships, **spot connections**, adults and peers about what they notice and not be afraid to **make mistakes**.

# Mathematics

## ELG: Number

Children at the expected level of development will:

- Have a deep understanding of numbers to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5.
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

## ELG: Numerical Patterns

Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system.
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

# Mastering number - NCETM

- Subitising
- Cardinality and Counting
- Comparison
- Composition



## • Subitising

At its simplest, subitising is being able to visually see a number of objects instantly without needing to count them out one at a time.

In school, we use different number patterns and games to support children's understanding of numbers and help them recognize how 'many' each arrangement is without the need to count.

### **Why is subitising important?**

Subitising helps children to see, solve, and manipulate numbers in their head.

This develops their number sense and helps them master key calculation strategies at an early stage.

Often children memorise numbers but don't always fully understand the relationship between numbers and amounts. It's a tough concept to grasp but subitising helps them connect the mathematical dots, which will help them in their Early Years learning.



## Cardinality and Counting

Understanding that the cardinal value of a number refers to the quantity, or 'howmany-ness' of things it represents

- ✓ Counting: saying number words in sequence
- ✓ Counting: tagging each object with one number word
- ✓ Counting: knowing the last number counted gives the total so far
- ✓ Subitising: recognising small quantities without needing to count them all
- ✓ Numeral meanings
- ✓ Conservation: knowing that the number does not change if things are rearranged (so long as none have been added or taken away)



## Comparison

Understanding that comparing numbers involves knowing which numbers are worth more or less than each other

✓ More than/less than

✓ Identifying groups with the same number of things

✓ Comparing numbers and reasoning

✓ Knowing the 'one more than/one less than' relationship between counting numbers



## Composition

Understanding that one number can be made up from (composed from) two or more smaller numbers

- ✓ Part-whole: identifying smaller numbers within a number (conceptual subitising – seeing groups and combining to a total)
- ✓ Inverse operations
- ✓ A number can be partitioned into different pairs of numbers
- ✓ A number can be partitioned into more than two numbers
- ✓ Number bonds: knowing which pairs make a given number

# Vocabulary

## Place Value

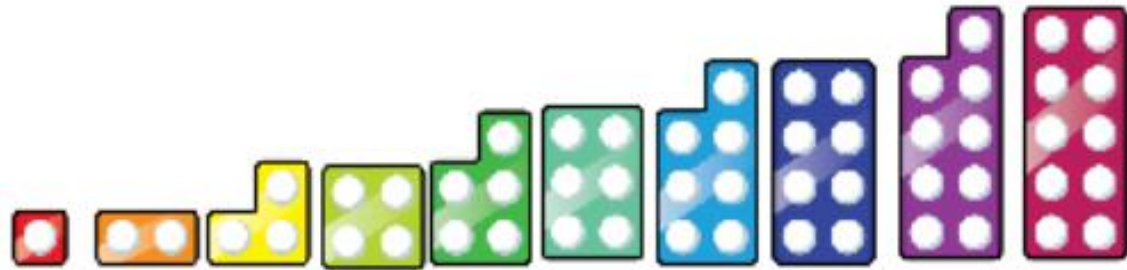
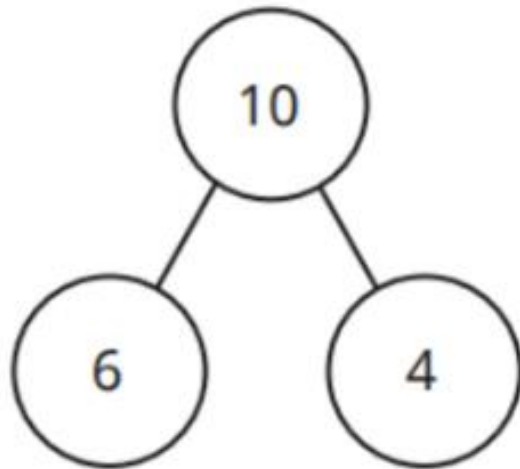
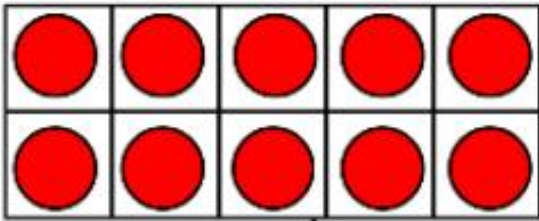
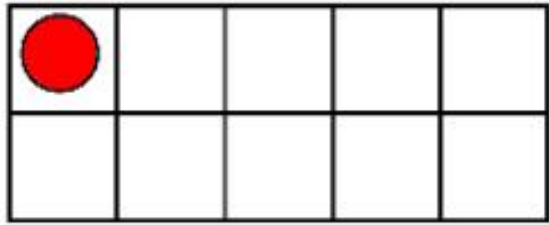
Reception
count
subitise
order/ordinal
compare
forwards
backwards
numerals
digit
one more
one less
equal to
more than
less than (fewer)

## Addition & Subtraction

Reception
add
plus
altogether
total
take away /minus
number bonds
part
whole
digit

## Multiplication & Division

Reception
double
half
twice as many
equal
unequal
share
group
odd
even



# Vocabulary

## Geometry – properties of shape

Reception
2-d shapes
rectangle
square
circle
triangle
characteristics
3-d shapes
cuboids
cubes
cone
spheres
curved
straight
flat

## position and direction

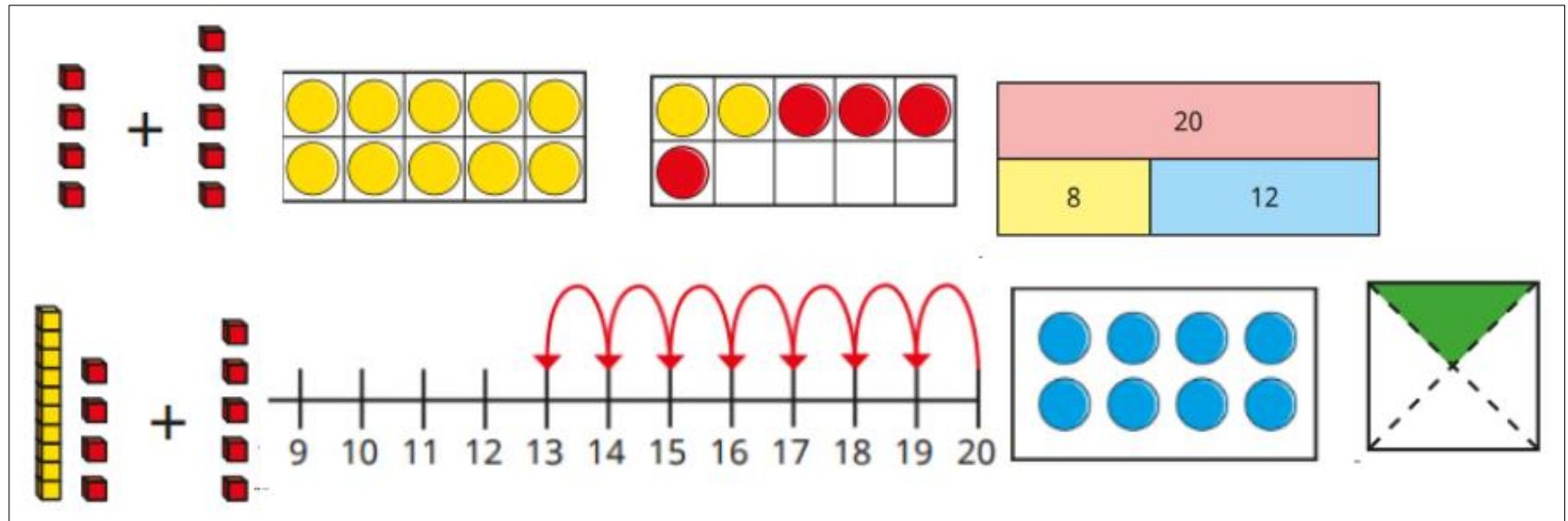
Reception
over
under
between
around
through
on
into
next to
behind
beneath
order
repeat
patterns
on top of

# Concrete, Pictorial, Abstract – CPA approach.

- Concrete – manipulatives.



- Pictorial.



- Abstract.

$$5 + 6$$

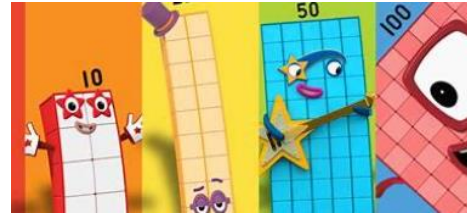
$$8 + 7$$

$$5 + 4$$

$$9 + 8$$

# How to help at home.

- Practise recall of number bonds, especially to 10.
- Bring maths into everyday life i.e discuss the time together, look at the times on TV guides, pay for things with cash and work out the change, sort your socks into pairs and count them, look at train/bus timetables. Play **board games**.
- Watch Numberblocks on Iplayer.
- Topmarks <https://www.topmarks.co.uk/eyfs>
- White Rose app [1-minute maths app | White Rose Education](#)

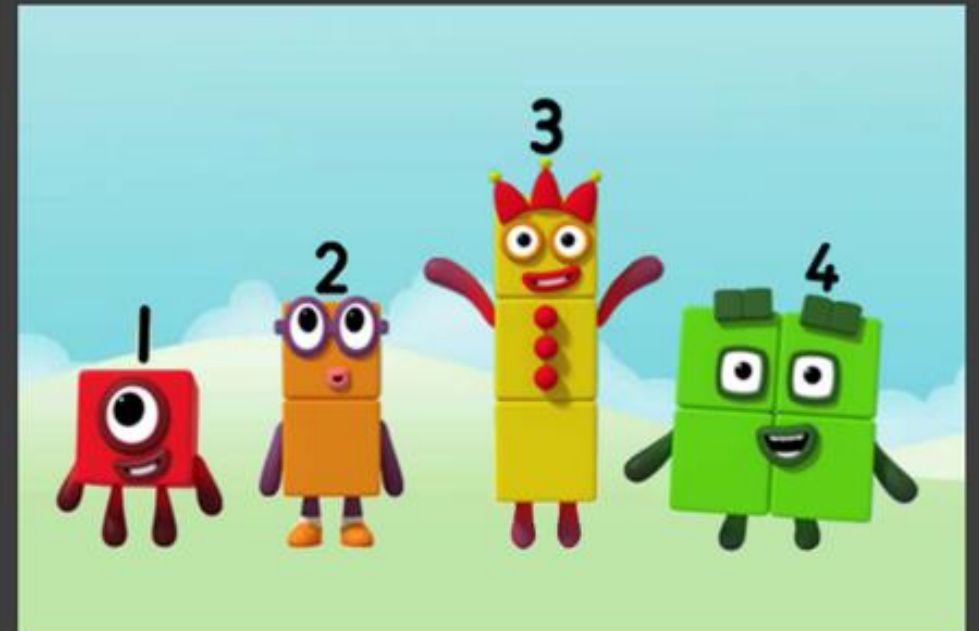


Numberblocks Support Materials > Numberblocks at home

EARLY YEARS MATERIALS

# NUMBERBLOCKS AT HOME

Resources to accompany the CBeebies Numberblocks series, designed for parents to use at home with children



# General tips that can make a difference in maths


- Provide lots of opportunities to say how many things you can see (up to 5) without counting.
- Whenever you talk about a small set of objects, say the number. For example, please pick up those 3 teddies or look at those 2 dogs.
- Count up (starting from one) when walking upstairs and count back when walking downstairs.
- Count lots of different objects, big and small, and ask 'How many are there?' Your child should be able to tell you without going back and re-counting. If they can't, then tell them: 'There are 6 altogether'.
- Play with fingers, firstly practise counting fingers.
- Ask your child to put their fingers down and then say or hold up a number such as 3. Can they do it without counting? Can they do it using different fingers? Can they do it using fingers from two hands?
- Play board games with your child which involve moving along numbered tracks, such as 'Snakes and Ladders'. Check that your child counts along the track correctly, moving one square for each number counted.

***Regular use of these simple ideas, whenever the opportunity arises, will improve your child's maths.***

# General tips that can make a difference in maths

- Notice when there are two amounts and one is more than the other, or they are the same. For example, I have 2 eyes and 2 ears, or I have more chips than peas.
- Talk about and describe shapes you can see outside or around your home. For example, count corners, talk about straight/curved edges, flat/curved surfaces. If you have building blocks then talk about and describe the things that are built.
- In the bath or at the sink, play with containers, pouring water, counting how many small pots are needed to fill the big container.
- Encourage your child to draw a picture of their number work and explain their mark-making to you, for example, how many leaves they find on a walk. This doesn't necessarily mean writing the numerals (1, 2, 3, 4... etc.).
- Sing counting songs and rhymes. You can find some on the internet, but children love it if you join in with them!
- Make a deliberate maths mistake from time to time and ask your child to explain why you are wrong. For example, say that 4 is bigger than 5.

***Regular use of these simple ideas, whenever the opportunity arises, will improve your child's maths.***



The way to get started  
is to quit talking and  
begin doing.

Walt Disney



Thank you for  
coming.

**Any questions?**