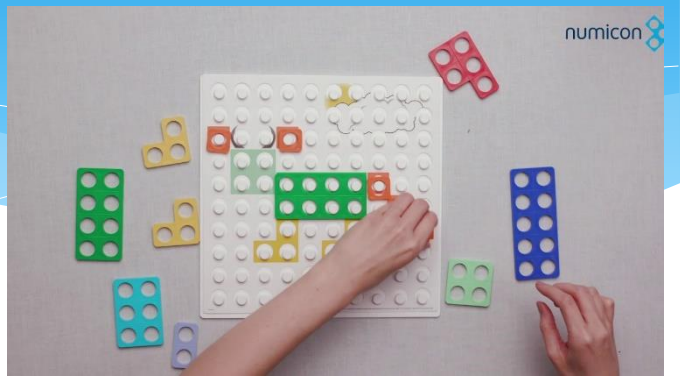
Reception
Maths Workshop

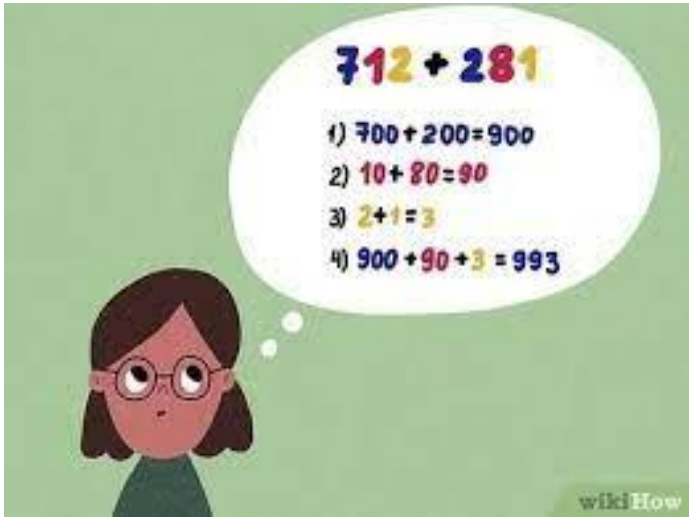
Today's talk



- What do we do in school?
- What does the curriculum look like?
- Useful resources – physical, books and websites
- How you can help at home

On a scrap piece of paper write your name.

Please be ready for some mental maths!



Maths is like Cabbage……..

You either love or hate it depending on how it was served up to you as a child!

Always give a positive view of Maths to your child.

Children develop their Mathematical understanding in the following ways:

- **Exploring** - playing with numbers, exploring weight, capacity, measures, counters, dice.
- **Reasoning**- answering why and how, talking about what they found.
- **Problem - solving**- How can I make 5? A shape with 3 corners?
- **Fluency** - quick mental recall! Coming to an answer quickly and without in depth thinking. This is important as it will form the foundations of a child's Mathematical knowledge.

At The Mead we want your child's experiences of Maths to be…….

fun

memorable

interesting

practical

exciting

The Early Years Foundation Stage curriculum

Development Matters states:

It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, ‘have a go’, talk to adults and peers about what they notice and not be afraid to make mistakes.

The Early Years Foundation Stage curriculum

Development Matters Statements

Mathematics
• Count objects, actions and sounds.
• Subitise.
• Link the number symbol (numeral) with its cardinal number value.
• Count beyond ten.
• Compare numbers.
• Understand the 'one more than/one less than' relationship between consecutive numbers.
• Explore the composition of numbers to 10.
• Automatically recall number bonds for numbers 0-5 and some to 10.
• Select, rotate and manipulate shapes to develop spatial reasoning skills.
• Compose and decompose shapes so that children recognise a shape can have other shapes *within* it, just as numbers can.
• Continue, copy and create repeating patterns.
• Compare length, weight and capacity.

Early Learning Goal

Mathematics
Number
• Have a deep understanding of number 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.
Numerical Patterns
• 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.

How do we teach maths?

We make it fun! Where possible Maths is linked to real life problems, stories and children's interests.

Using objects, children need to be secure in using practical apparatus before moving onto more abstract concepts.

Throughout the day: counting how many children in the classroom, using the visual timetable, action songs and singing, and questioning during independent learning such as how many blocks have you used? Who is taller, shorter?.

Short, focused carpet inputs with the whole class and in addition, we do small group work and adult led tasks which children complete independently or support by an adult.

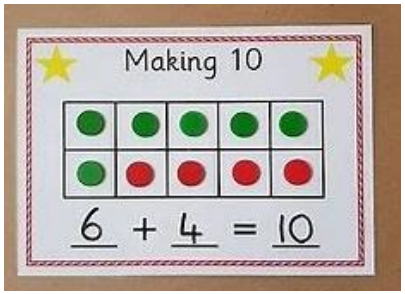
White Rose Maths

Autumn

Matching, sorting and comparing
Patterns
Measure
2D Shapes
Subitising
1 more, 1 less
Number Composition

Spring

Continuing Number composition
Introducing Zero
Mass and capacity
Length and height
Time
2d and 3D Shapes
Conceptual subitising to 10



Summer

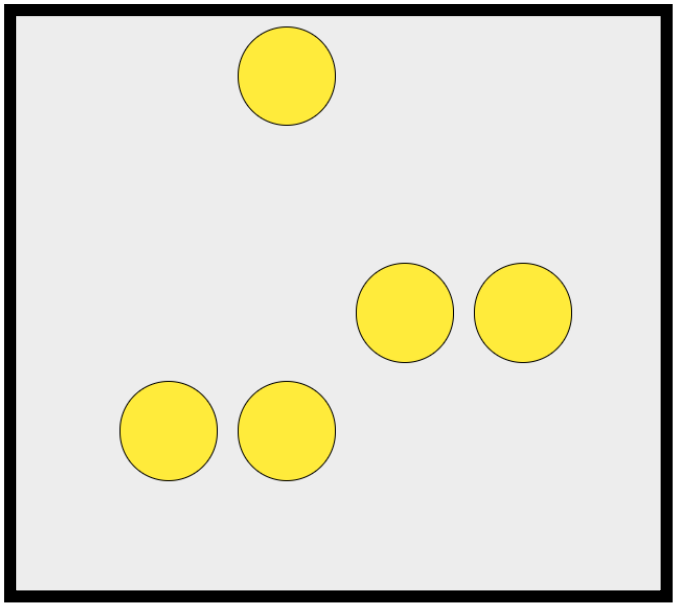
Building numbers beyond 10
Counting beyond 20
Addition and subtraction
Manipulating and creating shapes
Sharing and Grouping
Doubling
Odd and Even Numbers

Subitising

“Young children have a remarkable skill: they can recognise numbers of things without counting. This is called subitising, and it develops from a very early age. Very young babies can not only tell the difference between one and two but also between large numbers of dots when there are twice as many in one group, as with 16 and 8 (Sarama and Clements, 2009). Young children also have powerful visual memories and some may find it easier to remember images than words: three-year-olds can recognise three things, although they may not say the word. Subitising can help children to build images for numbers, to visualise and to learn number facts. For instance, most four-year-olds readily learn to recognise five dots on a dice, which helps them to understand the cardinal value or **'howmanyness'** of five, which they can link to the word and symbol for 5. Structured images like this also help children to begin to see numbers inside numbers, for instance seeing four and one within five.”

Taken from https://nrich.maths.org/14004

What questions would you ask your child to support subitising?



What do you notice?

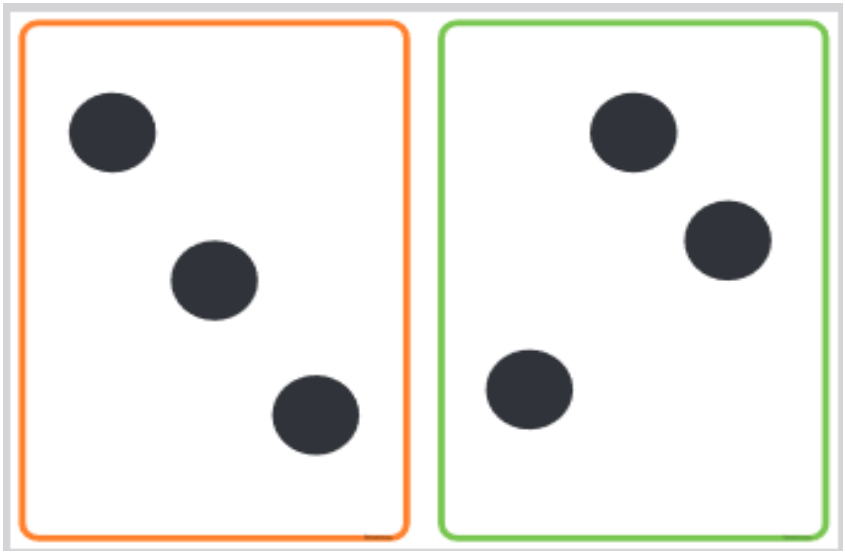
How did you see it?

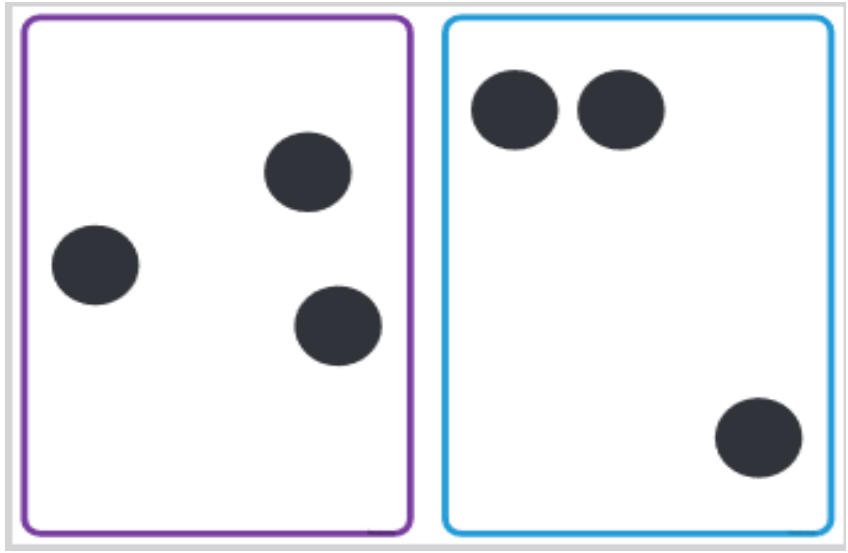
Look at it in a different way and describe what you see.

Draw how you see it (in the air / on some paper etc).

Ask someone else how they see it – was it the same way?

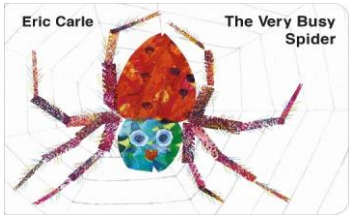
Subitising

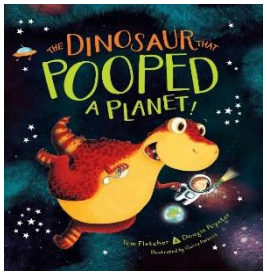


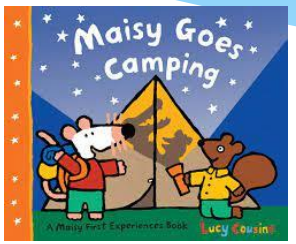


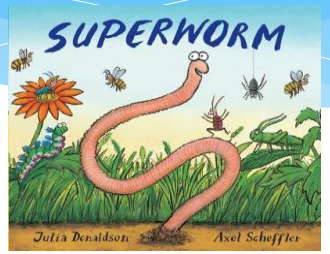
Subitising

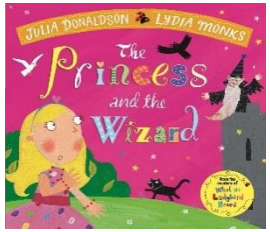
Maths books

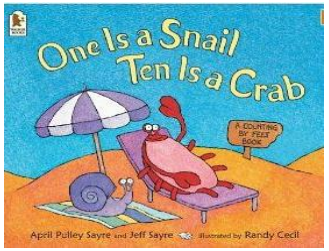

Eric Carle
The Very Busy Spider

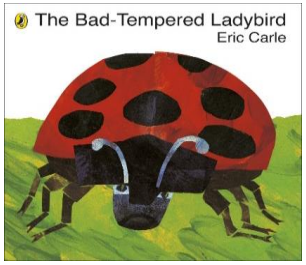

THE DINOSAUR THAT POOPED A PLANET!

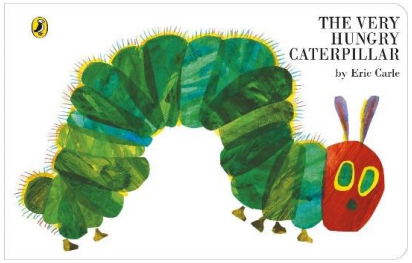

Maisy Goes Camping
A Maisy First Experiences Book
Lucy Cousins

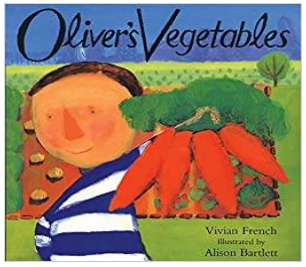

SUPERWORM
Julia Donaldson
Axel Scheffler

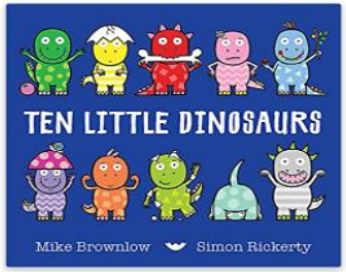

JULIA DONALDSON
LYDIA MONKS
The Princess and the Wizard

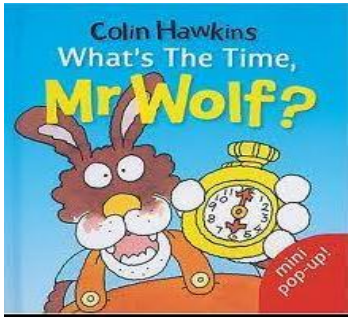

One Is a Snail Ten Is a Crab
A COUNTING BY FEET BOOK
April Pulley Sayre and Jeff Sayre
Illustrated by Randy Cecil

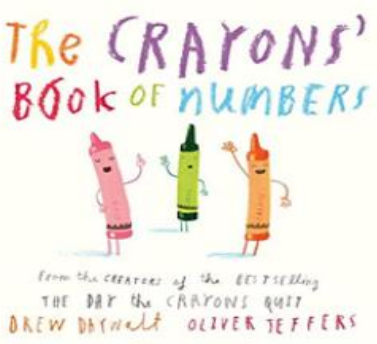

The Bad-Tempered Ladybird
Eric Carle


THE VERY HUNGRY CATERPILLAR
by Eric Carle


Oliver's Vegetables
Vivian French
Illustrated by
Alison Bartlett


TEN LITTLE DINOSAURS
Mike Brownlow
Simon Rickerty


Colin Hawkins
What's The Time, Mr Wolf?
mini pop-up!


The CRAYONS' BOOK OF NUMBERS
THE DAY the CRAYONS QUIT
DREW DAYWALT
OLIVER JEFFERS

Subitising

White Rose Maths app available – 1 minute maths games
https://whiteroseeducation.com/1-minute-maths#download

Number Talks

Number Talks encourages mathematical thinking and reasoning.
https://nrich.maths.org/14005

Number Talks

Recognising, creating and describing patterns with numbers

Children often enjoy saying how they see something differently from someone else.

Adults could show interesting arrangements of objects and invite children to talk about the numbers they see.

The Activity
Arrange five large magnets on a tin tray and confirm that everyone sees five. Ask, 'What numbers can you see hidden inside five?' Collect different views. Turn the board away to rearrange, show briefly and ask, 'How do you see them now?'

Encouraging mathematical thinking and reasoning:

Describing
Can you tell me how you saw them?
Did anyone see them differently? How did Lucas say he saw them?

Reasoning
How did you know how many there were?
Does this way make it easier to see how many there are? Why did you find it easier?

Opening Out
Has anyone got a quicker way of counting?
Can you arrange your counters so that you can quickly see how many there are?

Recording
Can you copy this pattern with your counters?
Can you record this by drawing or stamping or with stickers?

Number Bonds

A number bond is 2 numbers that make a given number.

Children need to learn their number bonds but also understand what that means.

In Reception we start with our number bonds to 5 and move on to number bonds to 10. Children need to know these to achieve the expected outcome in Maths at the end of the year.

Questions to ask you child:
Which 2 numbers make 5?
Which number goes with _ to make 5?
If I have 5 and take away _ how many will I have left?

Make it into a story:
I went to the shop and bought 5 pieces of fruit. I bought 3 apples, how many oranges did I buy?
Joe gave me 2 pencils and Ana gave me 3 pencils. How many pencils do I have?

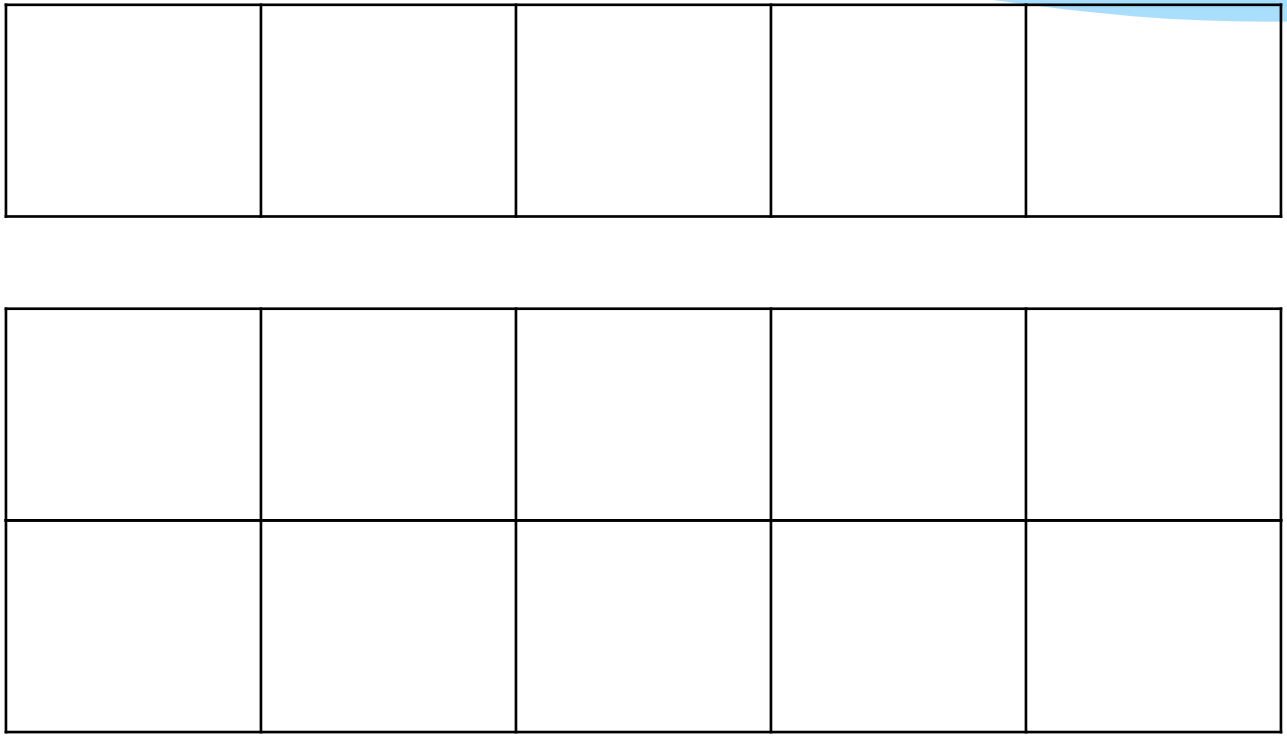
Number bonds to 5

0 + 5 = 5
1 + 4 = 5
2 + 3 = 5
3 + 2 = 5
4 + 1 = 5
5 + 0 = 5

Number bonds to 10

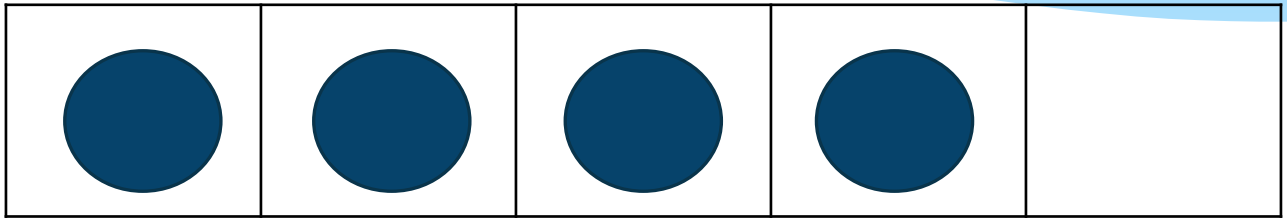
10 + 0 = 10
9 + 1 = 10
8 + 2 = 10
7 + 3 = 10
6 + 4 = 10
5 + 5 = 10
4 + 6 = 10
3 + 7 = 10
2 + 8 = 10
1 + 9 = 10
10 + 0 = 10

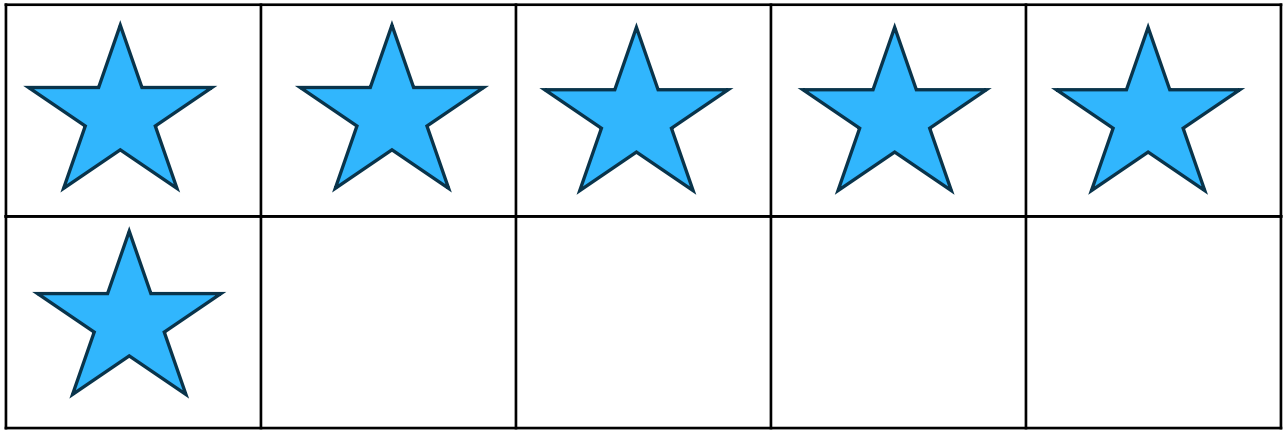
5 frames and 10 frames



We don’t want children to count objects in 5 or 10 frame – we want them to use the skill of subitising and noticing patterns

5 frames and 10 frames






Number
BLOCKS
1
2
3
4
5

CPA

Use at any time and with any age to support understanding

Concrete

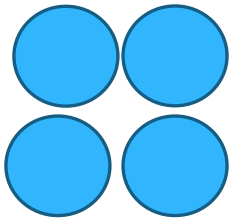
Introduces real objects and Maths resources that children can use to 'do' the maths.

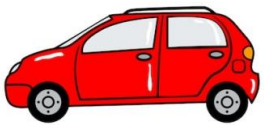
Pictorial

This stage uses pictorial representations of objects to let children 'see' what a maths problem looks like.

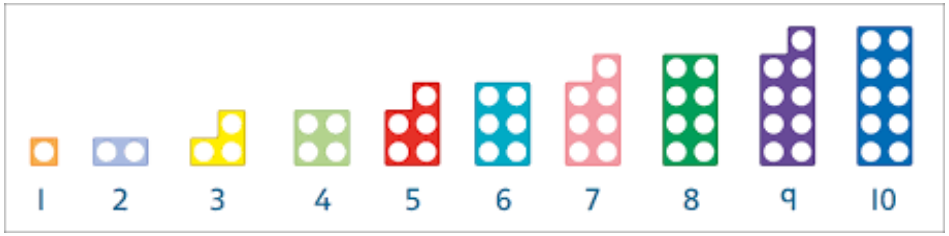
Abstract

This stage uses numerals and symbols. It is imperative that children are not moved to this stage too quickly!





Concrete



Make it practical and fun!

How you can help at home

Most importantly: please be positive about maths and look for opportunities to use maths.

Number formation

- Model number writing and reading in different ways: Lists, tracing, birthday cards, buses, front doors, recipes, in books, phones
- Number hunts
- Write numbers in sand/on the carpet/paint, make numbers with play dough, on a whiteboard, on paper, post it notes, on a tablet

How you can help at home?

Counting:

- Practise counting in ones, forwards and backwards to twenty. Sing counting songs and rhymes.
- Ask children to help set the table or sort the washing- can they match the pairs of socks, count in 2s, tell you if there is an odd/ even number?
- Look for things to count when you're out- how many cars/ birds/ dogs can you count?
- Go on a treasure hunt: Can you find 5 flowers/ 7 twigs/ 10 leaves

Games:

- Play board and dice games, snap, pairs, dominoes, hopscotch, skittles. Jigsaw puzzles are great for spatial awareness and fine motor skills.

Sharing books:

- Talk about the number, position and shape of things in the pictures.

Money:

- Begin to recognise and sort coins, practise counting it in the shops or as part of role-play with real coins at home.

How you can help at home?

- Point out **patterns** in everyday situations e.g. tablecloth, wallpaper, books. Create your own with objects, paint, stickers or Lego.
- Demonstrate the **language** for shape, position and measures e.g. sphere, inside, under, shortest, heavy.
- Use **mathematical names** for shapes and encourage children to talk about the shapes that they see.
- Encourage your child to use the **correct terms** early on- tall, short, narrow, wide, thick, thin etc…
- **Time**: look at clocks, point out the time throughout the day, think about calendars and dates. Days of the week and months of the year.
- **Cooking**: encourage children to help in the kitchen by weighing, comparing ingredients using heavier and lighter, measuring liquids.
- **Sharing**: Help children to understand that one thing can be shared by a number of pieces e.g. pizza, cake. They are usually quick to tell you if it is the same size!

How you can help at home?

Link to school

Evidence me

Tell us about any maths activities your child has done at home

Coming up next week….

- Tells you what we are doing in maths that week
- Homework – from the Spring Term

Any questions?

Useful websites

https://www.topmarks.co.uk/maths-games/3-5-years/counting - Maths games

https://www.mathsisfun.com/ - A range of maths games.

https://whiteroseeducation.com/ - maths curriculum resources and support for parents.

https://www.bbc.co.uk/cbeebies/games - The games cover the whole curriculum and are tablet friendly.

http://www.crickweb.co.uk/ - Activities focusing on Maths and Literacy. Free to use

https://www.pinterest.co.uk/ - While Pinterest isn't a learning website as such, it is nonetheless an absolute treasure trove of resources if you would like an activity for your child that isn't screen based. Pinterest has so many investigative activities that you can make at home, some beautiful art activities and fine motor activities. Type 'eyfs' or 'for kids' after your search. For example 'numbers to 10 for kids' or 'shape patterns for kids'

https://www.youtubekids.com/ You can search for a wide range of videos on number bonds, shapes, counting, as well as phonics, Alphablocks, Number Jacks etc. 'Art for Kids' and 'Cosmic Yoga Kids'.