

# Early Maths

- What Maths looks like in an Early Years (focus on number)
- To familiarise yourself with the language used in maths.
- Provide ideas and tips for supporting your child at home.

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POSITIVE  
ATTITUDE

What are your  
memories of maths  
at school?

How do you feel about  
maths now?



# 10 Growth Mindset Statements



What can I say to myself?



INSTEAD OF:

TRY THINKING:

I'm not good at this.  
I'm awesome at this.  
I give up.  
This is too hard.

I can't make this any better.  
I just can't do Math.  
I made a mistake.

She's so smart. I will never be that smart.  
It's good enough.  
Plan "A" didn't work.

- 1 What am I missing?
- 2 I'm on the right track.
- 3 I'll use some of the strategies we've learned.
- 4 This may take some time and effort.
- 5 I can always improve so I'll keep trying.
- 6 I'm going to train my brain in Math.
- 7 Mistakes help me to learn better.
- 8 I'm going to figure out how she does it.
- 9 Is it really my best work?
- 10 Good thing the alphabet has 25 more letters!

(Original source unknown)

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# Aims of the National Curriculum

In the Early Years, we are aiming to give the children the foundational skills in readiness for the National Curriculum in Key Stage 1 and Key Stage 2.

These three concepts that help children work towards mastery.

- **Problem Solving**

Through problem-solving lessons and activities, children are encouraged to use their mathematical skills and understanding to solve problems unfamiliar to them.

- **Reasoning**

Maths reasoning tasks get children thinking about number problems logically so they can reach conclusions, find solutions and decide which methods to use and why.

- **Fluency**

Fluency tasks help children strengthen their foundational knowledge. They practise applying their skills and understanding to different number problems with varying contexts and levels of complexity, while independently choosing the method they use to tackle number problems successfully. Fluency brings together problem-solving and reasoning.

# By the time they reach the end of Reception...

## **Number**

- 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.

## **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.

# Three Stages

## Concrete:

Children physically line up ducks in a row and verbally label them, e.g. 'first /second / third.'



## Pictorial:

Children order slides with pictures of ducks, for example, on the Interactive Whiteboard.



## Abstract:

Children apply their understanding of ordinal numbers, e.g. by using written 1st, 2nd and 3rd labels and other related verbal language when ordering objects.

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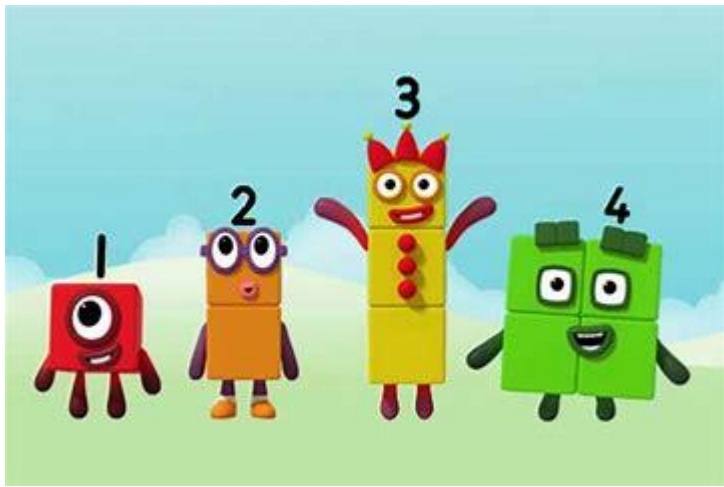
The background of the slide is a dense, colorful pattern of various numbers (0-9) in different colors and sizes, creating a vibrant and abstract texture. The numbers are scattered across the entire page, with some appearing larger and more prominent than others.

# Number Sense

Becoming familiar with each number.

Being able to pull the numbers apart up to 10 and put them back together

Representing amounts in different ways



# Number Blocks

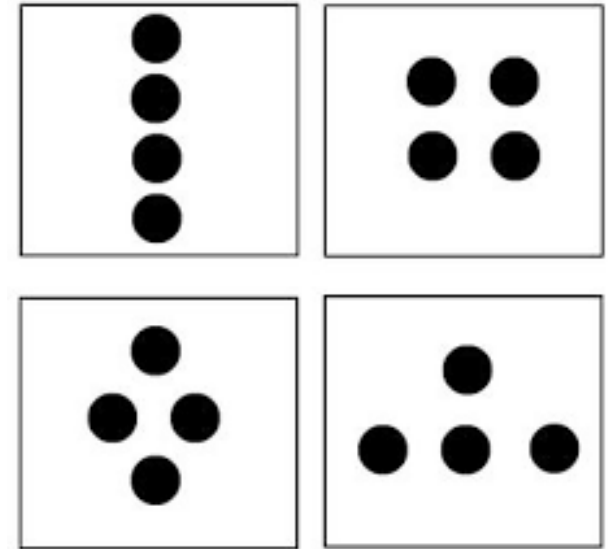
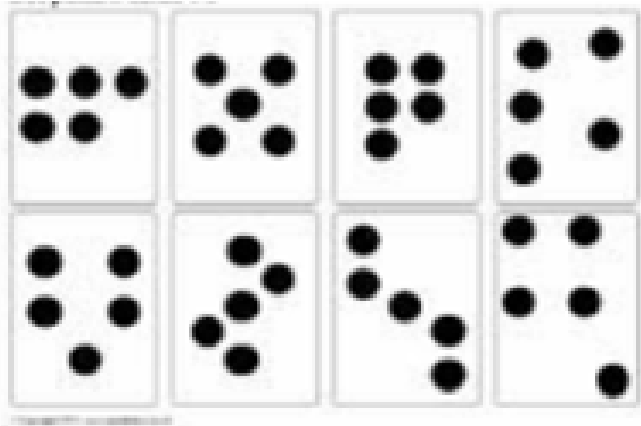
Children should become fluent, be able to reason and solve problems.

Enables children to have a deeper understanding of mathematical concepts.



# Subitising

Nurture children's number sense by developing subitising which means to be able to recognise numbers in small groups without the need for counting.

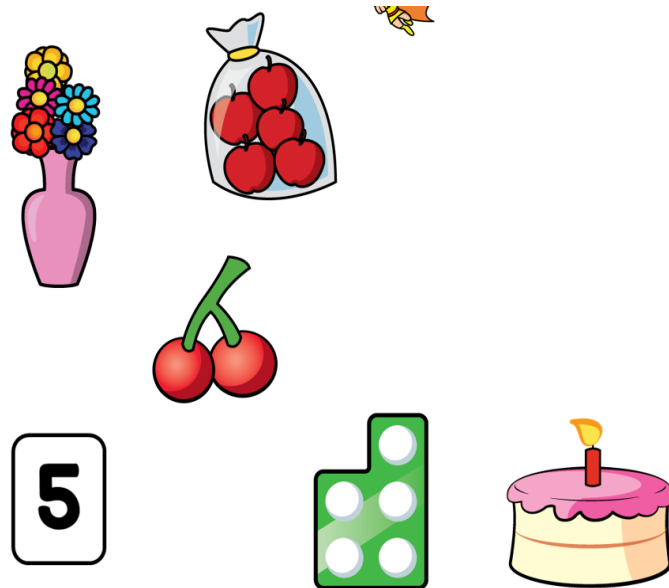
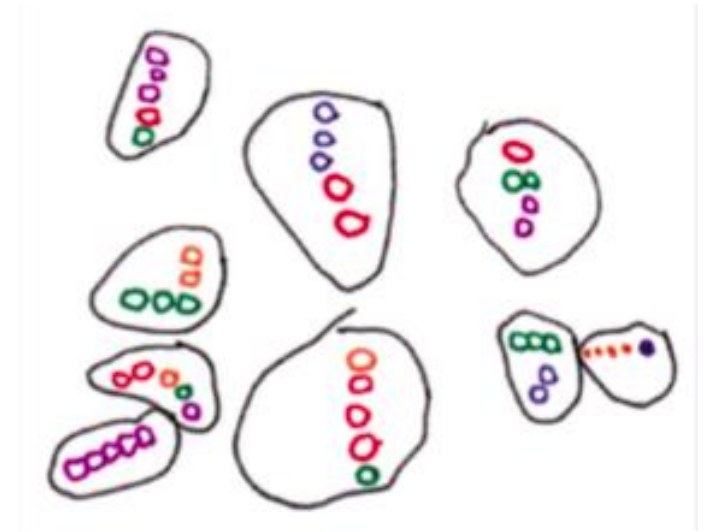


# Representing numbers in different ways

All these ways represent 5.

What is 5 and what is not 5?

Can the children explain?

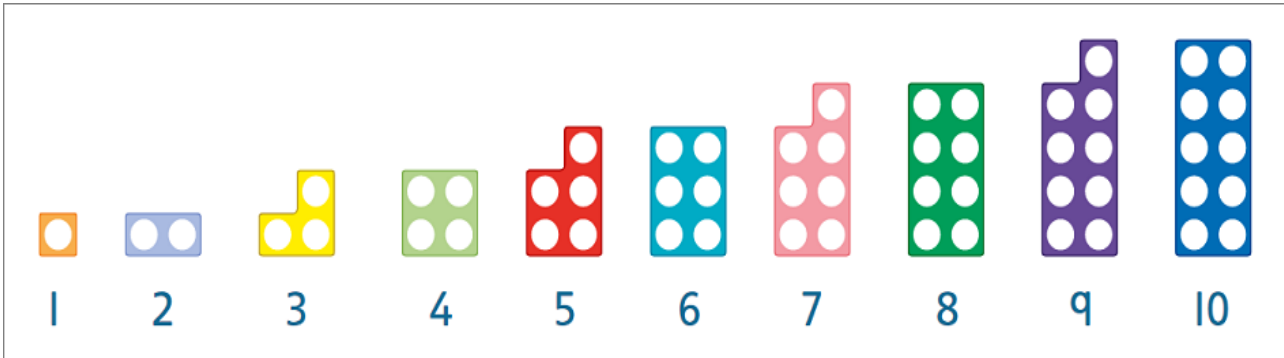


Five or not five?



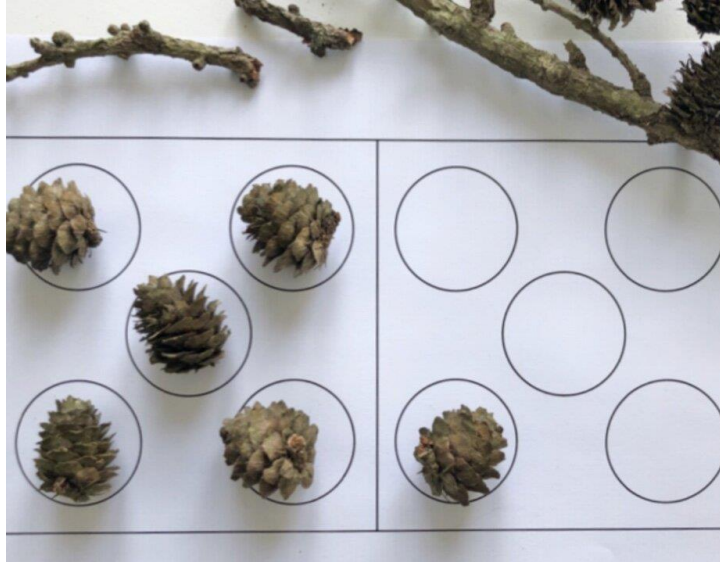
# Numicon

In school, we use Numicon to support children to develop a sense of number. It is a concrete resource that children can manipulate.



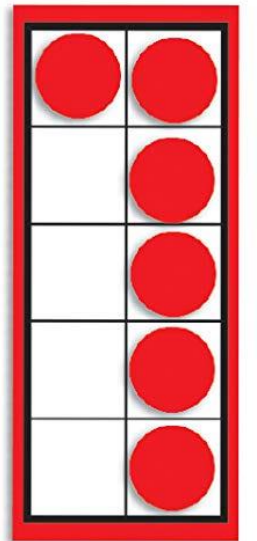
- Match the corresponding numerals to the correct plates
- Subitising
- Finding the matching pair
- Counting accurately
- Weighing them
- Ordering them
- Finding one more and one less
- Place value tens and ones – teen numbers understanding 1 represents 1 group of 10

# Hungarian number frame and tens frame



A way of representing numbers in different ways.

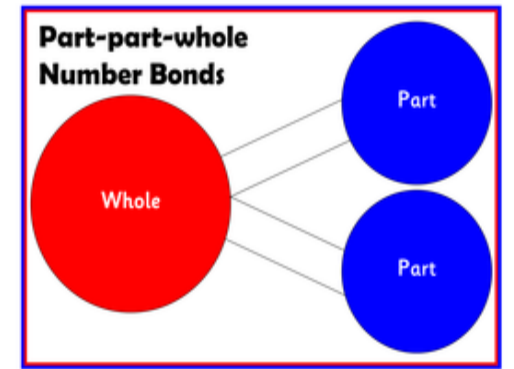
When children are confident in using a five frame they will move to a tens frame.



They can be used in many ways:

- To represent a number in different ways.
- To make pairs of numbers.
- To add and subtract numbers.

# Part Whole Model

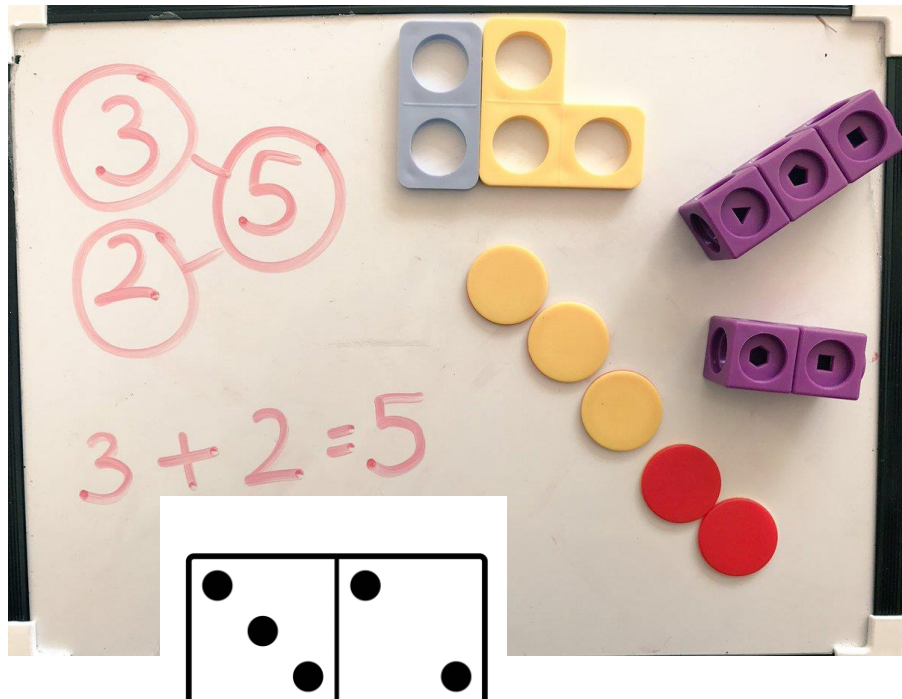


Represents the number in different ways.

The whole can be split into 2 or more parts.

The parts go together to make the whole.

The basis of adding and subtracting



# Reliable accurate counting

In order for children to have a good understanding of number, they need to be able to count reliably and consistently.

- Recite numbers in order, from different points.
- Counting objects that can be moved- move them to support counting.
- Counting something that can't be moved (sounds, pictures).
- Subitising.
- Knowing that the number they stop on is, is how many in that group.



# Mathematical Language

Model use of positional language in your conversations at home during every day life.

“Place your counter next to the ladybird.”

“Put your knife next to your fork”

“Left foot” “Right foot”



**How do you know?**

**What is the same?  
What is different?**

**What comes in  
the middle, next,  
before, after?**

**What do you  
notice?**

**What if.....?**

**Can you show me  
in a different  
way?**

# What can you do at home?



- Have fun!
- Play games- dominos, counting, pairs, snap, UNO, board games
  - Singing number songs- 5 little ducks, 10 green bottles
- Practical maths – counting items into a shopping basket, adding small quantities of coins together, sharing toy food at a teddy bear’s picnic etc.
- Play should include opportunities for size, shape, capacity, number and simple addition and subtraction vocabulary.
  - Online games exploring number, shape and more!
- Playing I spy whilst on walks out and about – which shapes or numbers can you see? Number plates, numbers on buses etc are great for this.

# Maths Guides

## Maths tips

- Collect everyday items, like milk bottle tops, which your child can sort into colours or sizes and count.
- Let your child help to pay for things in shops when you're paying with coins.
- Talk about time, such as "How long does it take to get to the park?".
- Let your child help you at home when you're using numbers, such as measuring ingredients for cooking or measuring for DIY.
- Go on a shape hunt and point out all the shapes you see, such as square windows or round wheels.
- Together, look at numbers on cars, houses, buses or road signs.
- Count how many things you see, such as lampposts.
- Play games that involve moving counters backwards and forwards while counting, such as snakes and ladders.
- Play card games where you have to match things, like snap.
- Play games such as skittles, where you keep score and count how many are knocked down.
- Use estimates in everyday activities, such as asking "How many cakes will we need if Granny and Grandad come to tea?".
- Hide objects and use clues to help your child to find them, such as "It's on top of the table, next to the remote control".



This leaflet is from a series of five, each leaflet covers a different age range from birth to five years old. Children develop at their own rates and in their own ways. The ages are suggestions of typical ranges of development.

If you have any concerns about your child's development, speak to your GP, health visitor or someone at your local Sure Start Children's Centre.

You can find all the leaflets and more advice about child development on the Surrey Family Information Service webpages

[www.surreycc.gov.uk/earlylearning](http://www.surreycc.gov.uk/earlylearning)



4 years plus

### What I like"

- Using real objects and solving real problems.
- Helping you with everyday jobs.
- Having time to investigate problems and try out new ideas.

### "What I can do"

- Talk about shapes.
- Count things like claps, steps or jumps.
- Use my fingers to show a number.
- See and point out numbers around me.

## Did you know?

Your child is learning when they are watching you using maths and maths language in everyday ways.



SURREY



## Handy guide to maths for parents of children aged 4 years plus



### "What I like"

- Having time to investigate problems and try out new ideas
- Helping you with everyday jobs
- Using real objects and solving real problems

### "What I can do"

- See and point out numbers around me
- Use my fingers to show a number
- Count things out like claps, steps or jumps
- Talk about shapes

### "How you can help me"

- Collect everyday items such as bottle tops, buttons, pebbles etc which you child can sort into colours, sizes and count.
- Let your child help with shopping, ask them to get you three bananas or two pints of milk. Talk about heavy and light as they add shopping to the trolley. Allow your child to pay for things in shops or get their own little shop when you are paying with coins.
- Talk about time, such as, "how long does it take to get to the shop?"
- Let your child help at home when you are using numbers for a purpose such as measuring out ingredients, measuring to hang up a picture, counting out money for the window cleaner.
- Play games that involve moving counters forwards and backwards whilst counting such as 'snakes and ladders'.
- Together look at numbers when out and about on cars, buses, house and anywhere else in the environment.
- Count number of things e.g. how many lampposts, how many red cars.
- Go on a shape hunt and point out all of the shapes you can see such as square windows and round wheels.
- Play card games where you match things such as 'snap' or 'pairs'.
- Use estimates in everyday activities, such as, " how many cakes will we need if Gran and Grandad come for tea?".
- Hide objects and use clues to help your child find them, such as "it's on top of the...., it's next to the.... it's under the...."

Remember every day brings opportunities!

These will be shared with you...