



# Mathematics in the Early Years

## Foundation Stage



The teaching of Mathematics in the Early Years Foundation Stage (EYFS) is split into 2 areas:

Number, including calculating and problem solving

Shape, space and measures

## Age 30-50 months Number

- Uses some number names and number language spontaneously.
- Uses some number names accurately in play.
- Recites numbers in order to 10.
- Knows that numbers identify how many objects are in a set.
- Beginning to represent numbers using fingers, marks on paper or pictures.
- Sometimes matches numeral and quantity correctly.
- Shows curiosity about numbers by offering comments or asking questions.
- Compares two groups of objects, saying when they have the same number.
- Shows an interest in number problems.
- Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same.
- Shows an interest in numerals in the environment.
- Shows an interest in representing numbers.
- Realises not only objects, but anything can be counted, including steps, claps or jumps.

# Mathematics in the Nursery

## Numbers (30-50 months)

Looking at numbers in the environment helps children to understand numbers as labels and for explaining the idea of 'how many'.



# Noticing numbers: recognising some and representing them

It is important to point out numbers within the environment: dates on the calendar, on the clock, prices, birthday cards and so on.



Children then begin to recognise numbers which are familiar to them such as their house number and age.

This also provides opportunities for children to start representing numbers by making marks, drawing pictures or holding up their fingers to show an amount.



Here Jarid is writing down the ingredients for the soup.



# Recognise some numerals of personal significance



This stocking has a house door with a number 11 on it so that Santa knows which house to come to.

# Pre-mark making skills

Showing a curiosity about numbers and numerals







Know that  
numbers identify  
how many  
objects are in a  
set

**Count everything!**



We can help  
children to  
understand that  
we can count lots  
of different  
things.

# One to one correspondence



# Matching numbers



# Numicon





Developing sorting, matching  
and mark making in a play environment

# Numbers as Labels and for Counting



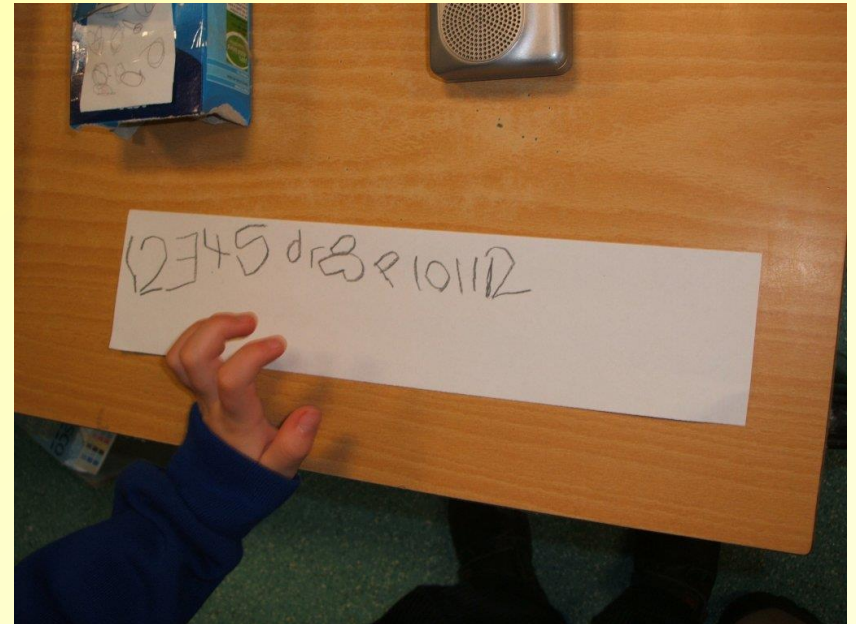
Uses number names and number language spontaneously

Uses some numbers  
and matches quantity correctly





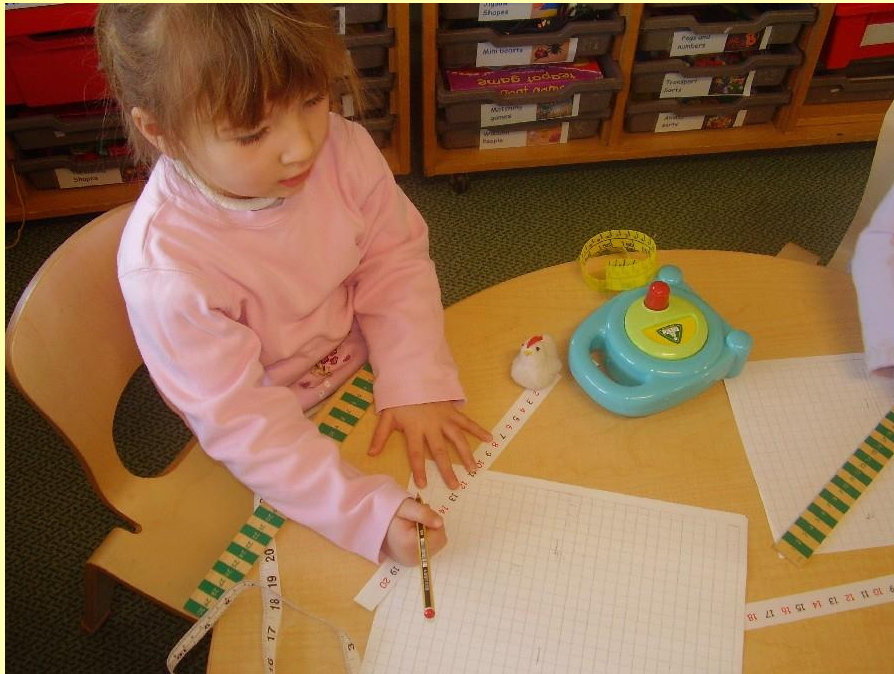
# Recognising numerals, saying and using them in a correct order



# Showing an interest by making arrangements with objects



# Using mathematical tools for measuring and mark making



Show curiosity about numbers by asking questions and offering comments



This child said her phone number and pressed the corresponding digits on the play phone

# Beginning to count objects and comparing quantities.

Once children begin to understand that numbers tell you 'how many' they soon begin to understand the importance of comparing quantities and begin to use the language of 'more' and 'less' to compare. This is very important if you want 'more cake', for example!

more



less



Match, then compare the number of objects in two sets



This child is comparing the two groups of objects and saying which has the most of each fruit.

Children using 10 in the bed song book, then problem solving and then being given squared paper to remember activity.



# Early calculation

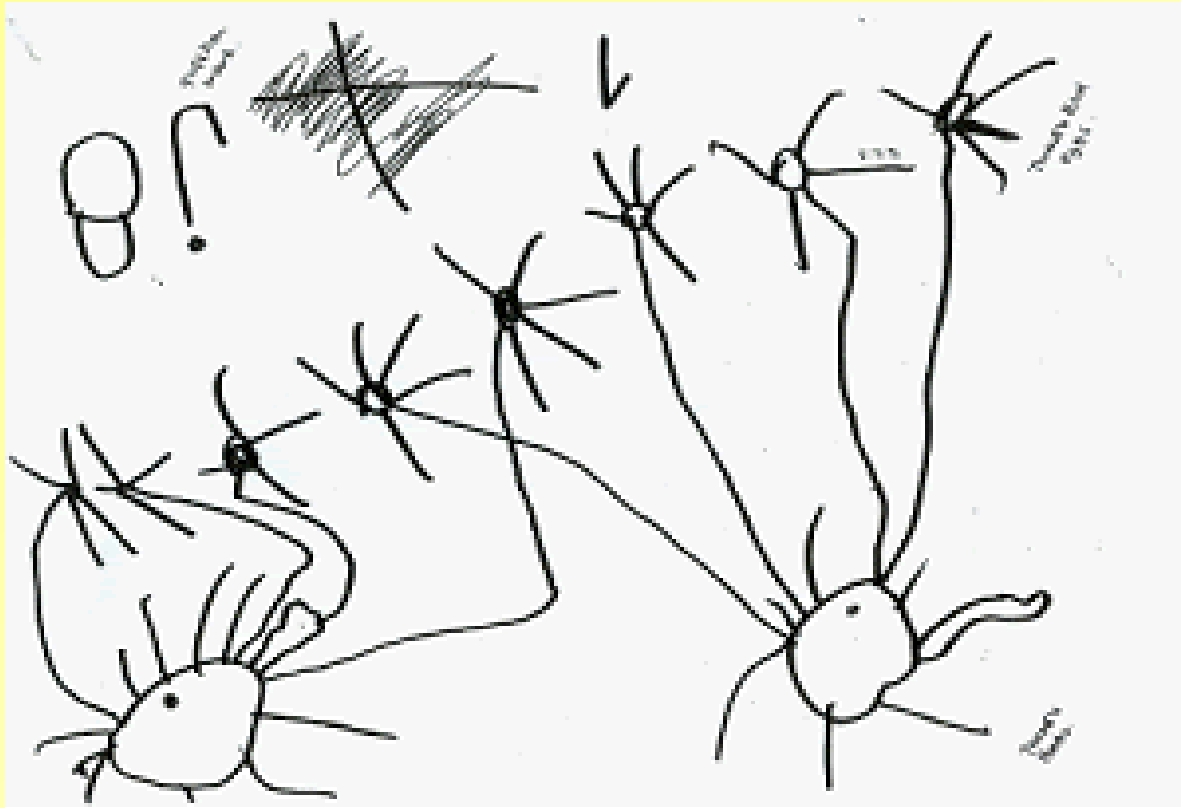
Once children can count objects accurately, early addition and subtraction can be taught. For example, finding out how many cakes are on a tray when 2 have a cherry and 1 is plain OR how many sheep are in the field if 1 runs away.







Sharing the food out between caterpillars.



"Can 8 be shared equally between two?" Using his own mathematical graphics, Kamrin solved the problem by inventing 'Tweedle Birds' and sharing eight eggs equally between them.

## Age 30-50 months Shape, Space and measure

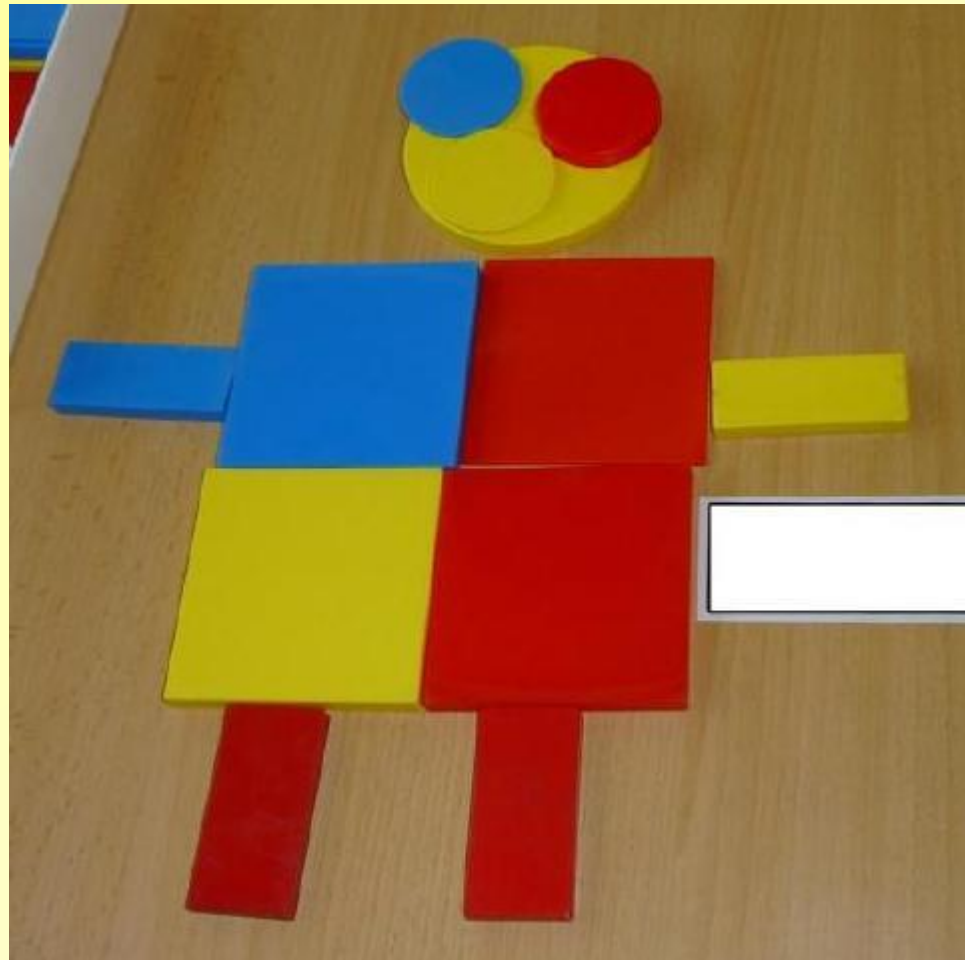
- Shows an interest in shape and space by playing with shapes or making arrangements with objects.
- Shows awareness of similarities of shapes in the environment. •

Uses positional language.

- Shows interest in shape by sustained construction activity or by talking about shapes or arrangements.
- Shows interest in shapes in the environment.
- Uses shapes appropriately for tasks.
- Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'.



# Make pictures with shapes



Blocks are great. Children learn about the properties of shapes. Which shapes roll? Which shapes can you stack? Which shapes have curved or flat faces|?



# Number and shape



# Positional language through play





# Exploring empty and full through water play



# Keep maths practical and have fun!

Bath-time (filling and emptying containers, counting)

Counting rhymes

Putting socks into pairs

Talk about numbers in the environment (eg, front door numbers, number plates, road signs etc)

Help with the cooking (measuring, weighing, ordering the recipe)

Setting table places (how many plates/cups etc)

Paying in shops (including change)

Estimating amounts (how many apples/sweets?)



# Useful resources & websites

## Games:

- ✓ board games like 'Snakes and ladders'
- ✓ card games like snap
- ✓ Bingo
- ✓ dominoes
- ✓ timing children when doing jobs (egg timers)

## Websites:

<http://www.topmarks.co.uk/learning-to-count/teddy-numbers>

<http://www.crickweb.co.uk/Early-Years.html>

<http://www.bbc.co.uk/cbeebies/games/numtums-games>

<http://mrcrammond.com/games/gordon/PoppingBalloonsv3sound.swf>

<http://www.ictgames.com/resources.html>