## How to Help Your Child with Maths - Year R

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## How to Help Your Child with Maths <br> Statutory Framework for the Early Years Foundation Stage

- Your child will be learning skills, acquiring new knowledge and demonstrating their understanding through 7 areas of learning and development (three prime and four specific)
- Communication and language
- Physical development
- Personal, social and emotional development
- Literacy
- Mathematics
- Understanding the world
- Expressive arts and design


# How to Help Your Child with Numeracy <br> Early Years Foundation Stage Framework 

- Expected levels that your child should reach at age 5 , usually the end of the reception year.
- These expectations are called the "Early Learning Goals (ELGs)"
- Early Learning Goals for numeracy are broken into two parts
- Number
- Numerical Patterns


# How to Help Your Child with Numeracy Number - Early Learning Goals 

- 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.


## How to Help Your Child with Numeracy

 Numerical Patterns - ELGs- 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 to Help Your Child with Numeracy The Counting Principles 

- The one-to-one principle
- The stable-order principle
- The cardinal principle
- The abstraction principle
- The order-irrelevance principle


# How to Help Your Child with Numeracy The One-to-one Principle 

- This involves children assigning one number name to each object that is being counted. Children need to ensure that they count each object only once, ensuring they have counted every object.


Give one and only one number name in one-to-one
correspondence with each object.
For example, count the number of:

- tiny things you can pack in a matchbox;
- shoes on a shoe rack
- pieces in the jigsaw
- peas that you find in different pods
- penny coins in a piggybank
- letters in their name
- times you can bounce or catch a ball


Can you put four cows into the field

## Spot mistakes

Eg The child counts the same object twice or repeats the same number

## How to Help Your Child with Numeracy

## The Stable-order principle

- Children understand that, when counting, the numbers have to be said in a certain order.

one

one

two

three

three


four

four


The names of numbers match the numbers

The names of numbers do not match the numbers

# How to Help Your Child with Numeracy <br> <br> The Cardinal Principle 

 <br> <br> The Cardinal Principle}

Children understand that the number name assigned to the final object in a group is the total number of objects in that group.

one

one

two

three

three
 four

five


The last number said represents the total number in the group

The last number said does not represent the total number in the group

## How to Help Your Child with Numeracy

 The Abstraction PrincipleThis involves children understanding that anything can be counted, including things that cannot be touched, such as sounds and movements e.g. jumps


> 1, 2 beats of the drum


1, 2 bounces of the ball


Count evenly spaced or regular claps or drum beats, first with eyes open to watch, then with eyes closed.

- Count pairs of claps or drum beats
- Count the sounds in repeated rhythmic patterns such as: tap, tap, pause, tap...
- Count the number of times you skip with your skipping rope
- Count the number of times that I jump
- Count how many big strides you take across the room...

How many windows does that house have?

# How to Help Your Child with Numeracy The Order-irrelevance Principle 

This involves children understanding that the order in which we count a group of objects is irrelevant. There will still be the same number.


6


## 5

## What is subitising?

All children are born with an innate ability to perceive the difference between one and two objects
With support and experience, they can quickly perceive up to 6 objects.

## 1 - How many?

## 2 - How many?



## 3 - How many?

## 4 - How many?

## What is subitising?

What order would you place them in according to level of difficulty?


## What is subitising?

- Perceptual Subitising - When the number of items is three of less.
Conceptual Subitising - Building groups i.e. six is two groups of three. You 'see' the numbers in sets.


## How to Help Your Child with Maths

 What are They Doing Now?- They are learning to subitise, count, order, sort, represent, partition and deepen their understanding of the numbers 1-5



## How to Help Your Child with Maths

 What are They Doing Now?- Representing 5



## How to Help Your Child with Maths

## What are They Doing Now?

- Partitioning 5


If $\qquad$ is a part, then the other part must be $\qquad$
____ is a part of
The whole is

## How to Help Your Child with Maths

 What are They Doing Now?- Partitioning 5 - part part whole model



# part + part = whole 

whole - part = part

There are 5

Whole
 buttons altogether

There is 1
blue button


## Begin to use the vocabulary involved in adding and subtracting

Count out 3 cakes. Count out 2 cakes. How many cakes altogether? Count all the cakes.
(Count: 1, 2, 3,... 1, 2...
Altogether there are: 1, 2, 3, 4, 5 .
Say together: 3 add 2 is 5 .)

Through practical activities and discussion, begin to understand and use the vocabulary of addition and subtraction:
a. in practical contexts, using objects;
b. by modelling with apparatus;
c. by modelling with fingers.
more, and, add, make, sum, total, altogether, score... take away, leave, how many are left?... how many are gone?
one more... one less...
how many more to make ...?
how many more is ... than ...?
how many less is ... than ...?
difference between...
Show me 3 fingers on your right hand. Show me 2 fingers on your left hand.
How many fingers showing altogether? (Count: 1, 2, 3... 1, 2... 1, 2, 3, 4, 5. Say together: 3 and 2 is 5 .)

## Finally - Number formation

0 - Circle the planet like a superhero, that's the way we make a 0.
I - Start at the top and down we run, that's the way we make a I.
2 - Make a curve and give it a shoe, that's the way we make a 2.
3 - Around the tree, around the tree, that's the way we make a 3.
4 - Down, across and down once more, that's the way we make a 4.
5 - Short neck, tummy fat, number 5 wears a hat.
6 - Make a curve, there are no tricks, add a loop and that's a 6
7 - Straight across and down from heaven, that's the way to make a 7
8 - Make a snake and do not wait, come back up and that's an 8.
9 - Make a loop then make a line, that's the way we make a 9.

## How to Help Your Child with Numeracy Take home messages

- Try to make maths as practical as possible
- Make maths fun, play games such as snakes and ladders, ludo, dominoes etc.
- Link maths to real life experiences. It is important that children see why they need maths

