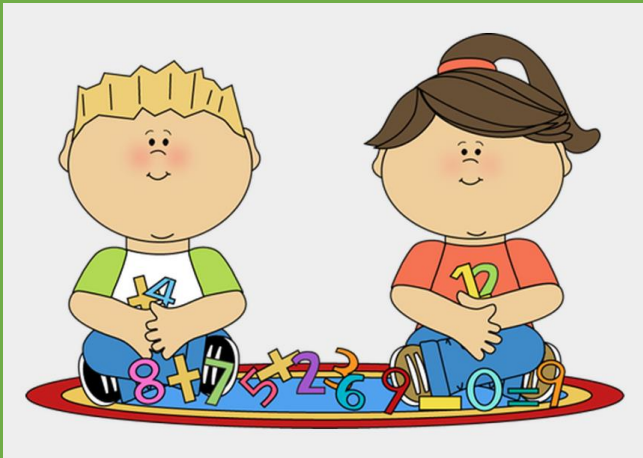


Newport Primary School

Primary 1 Curriculum Evening - September 2023



Numeracy

Conceptual vs Procedural

$$\begin{array}{l} +1 \quad +1 \\ 1998-29 = \\ +2 \quad +2 \end{array}$$

$$\begin{array}{r} 1998 \\ - 29 \\ \hline 1969 \end{array}$$

FLEXIBLE

By the end of Early Level (P1) ...

- Explains that zero means there is none of a particular quantity and is represented by the numeral 0.
- Recalls the number sequence forwards within the range 0 - 30, from any given number.
- Recalls the number sequence backwards from 20.
- Identifies and recognises numbers from 0 to 20.
- Orders all numbers forwards and backwards within the range 0 - 20.
- Identifies the number before, the number after and missing numbers in a sequence within 20.
- Uses one-to-one correspondence to count a given number of objects to 20.
- Identifies 'how many?' in regular dot patterns, for example, arrays, five frames, ten frames, dice and irregular dot patterns, without having to count (subitising).
- Groups items recognising that the appearance of the group has no effect on the overall total (conservation of number).
- Uses ordinal numbers in real life contexts, for example, 'I am third in the line'.
- Uses the language of before, after and in-between.
- Counts on and back in ones to add and subtract.
- Doubles numbers to a total of 10 mentally.
- When counting objects, understands that the number name of the last object counted is the name given to the total number of objects in the group.

- Partitions quantities to 10 into two or more parts and recognises that this does not affect the total.
- Adds and subtracts mentally to 10.
- Uses appropriately the mathematical symbols +, - and =.
- Solves simple missing number problems.

Effective Counting

Recognise without counting

Identify and Recognise

Uses 1:1 Correspondence

Counts on and back

Checks estimates by counting

Last number name is the total
in the group

Numeral / Number / Digit

Counts forwards and
backwards

Applies counting skills to ask
and answer questions

Recalls the number sequence

Uses ordinal numbers

Subitises regular dot patterns

Principles of Counting



Stable Order Principle

Understanding that the counting sequence stays consistent. It is always 1, 2, 3, 4, 5, 6, 7, etc., not 1, 2, 4, 5, 8.



One-to-One Correspondence Principle

Understanding that each object being counted must be given one count and only one count. It is useful in the early stages for children to actually tag each item being counted and to move an item out of the way as it is counted.



Order Irrelevance Principle

Understanding that the counting of objects can begin with any object in a set and the total will stay the same.



Cardinality Principle

Understanding that the last count of a group of object represents how many are in the group. A child who recounts when asked how many candies are in the set that they just counted, has not understood the cardinality principle.



Conservation Principle

Understanding that the count for a set group of objects stays in the same no matter whether they are spread out or close together.



Movement is Magnitude Principle

Understanding that as you move up the counting sequence, the quantity increases by one and as you move down or backwards, the quantity decreases by one (or by whatever number you are counting by as in skip counting by 10's, the amount goes up by 10 each time).



Abstraction Principle

Understanding that the quantity of five large things is the same count as a quantity of five small things. Or the quantity is the same as a mixed group of five small, medium and large things.



Grouping Principle

Understanding that in our base ten system objects are grouped into tens when the count exceeds 9 (and into sets of tens when it exceeds 99) and that this is indicated by a 1 in the tens place of a number.

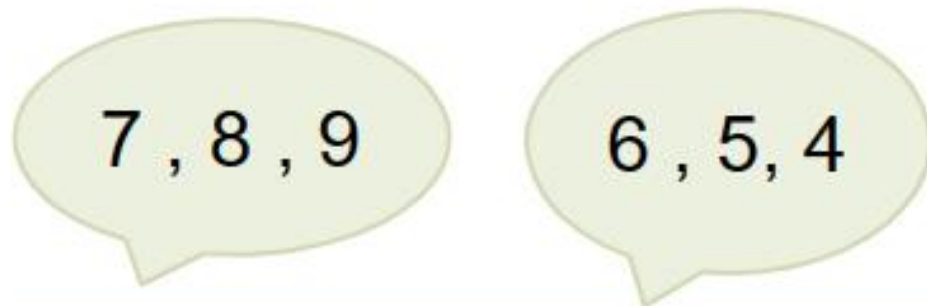
Effective Counting



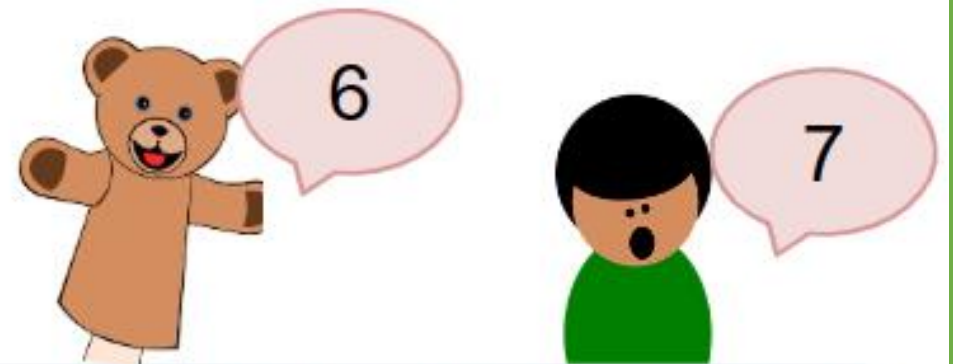
Knows the numeral names



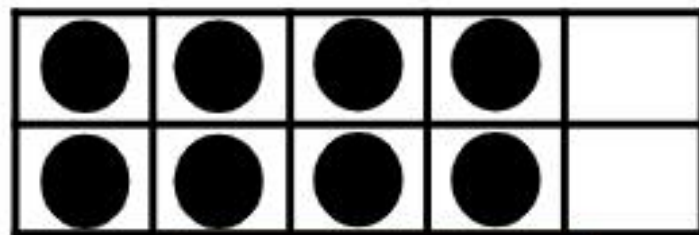
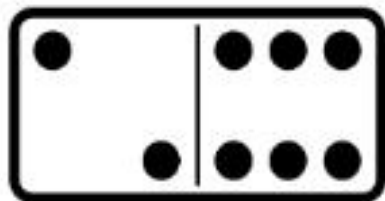
Can start counting from any number in the sequence



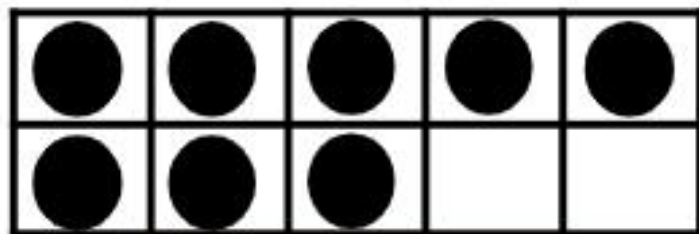
Can count forwards and backwards



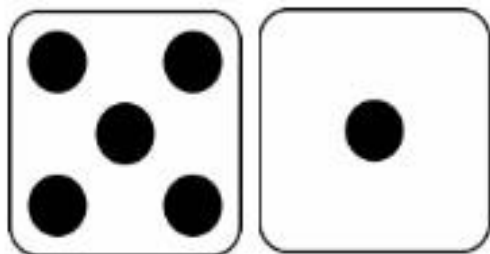
Can say the number that comes before, after and between



Pair Wise

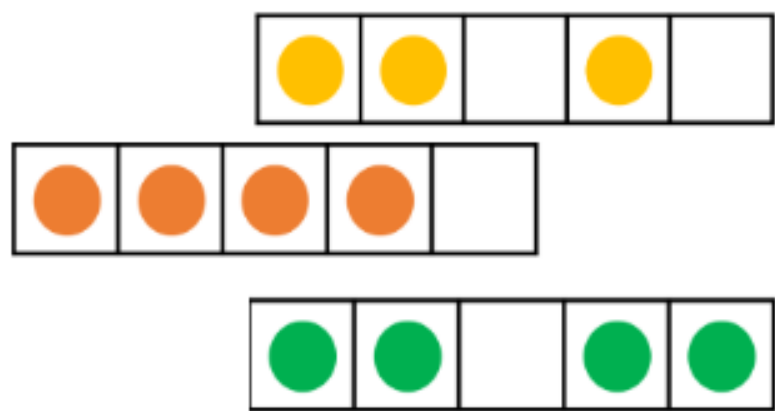


Five Wise

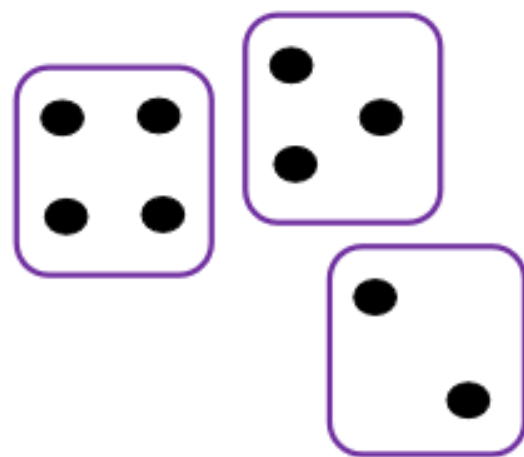
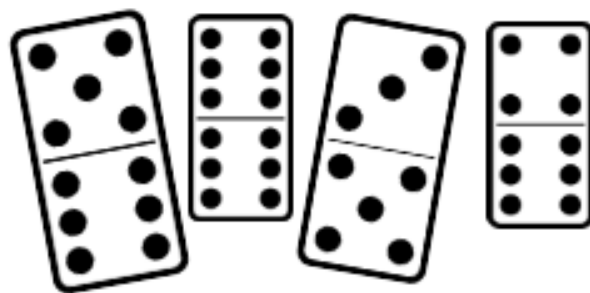


eight

What is Subitising?



'Subito'
to arrive
suddenly



Subitising is important because it:

- Develops understanding of what numbers mean or how many 'things' a number refers to
- Develops pattern recognition
- Reduces over-reliance on counting
- Develops essential number sense

Subitising

Definition

- The ability to tell how many objects are in a group at a glance, without counting.

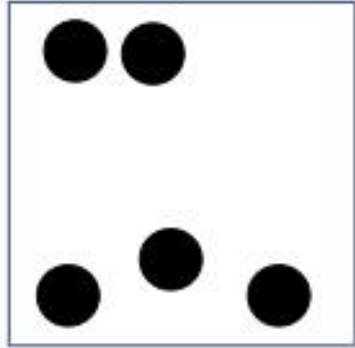
Importance

- Basis for moving beyond a reliance on counting by ones
- Helps develop sense of number size
- Starts development of seeing numbers flexibly - partitioning

pp 24 & 25



Conceptual Subitising



What do you see?
How do you see
it?

**The ability to
recognise a whole
quantity as the
result of recognising
smaller quantities**



Conceptual Subitising



What do you see?
How do you see it?

I see a 2 and a 2
and a 1 and a 1

I see a 4 and a 2

I see 2 and 2 and 2

(b) Part Whole Constructions -
Partitioning

$$6 + 3 = 9$$

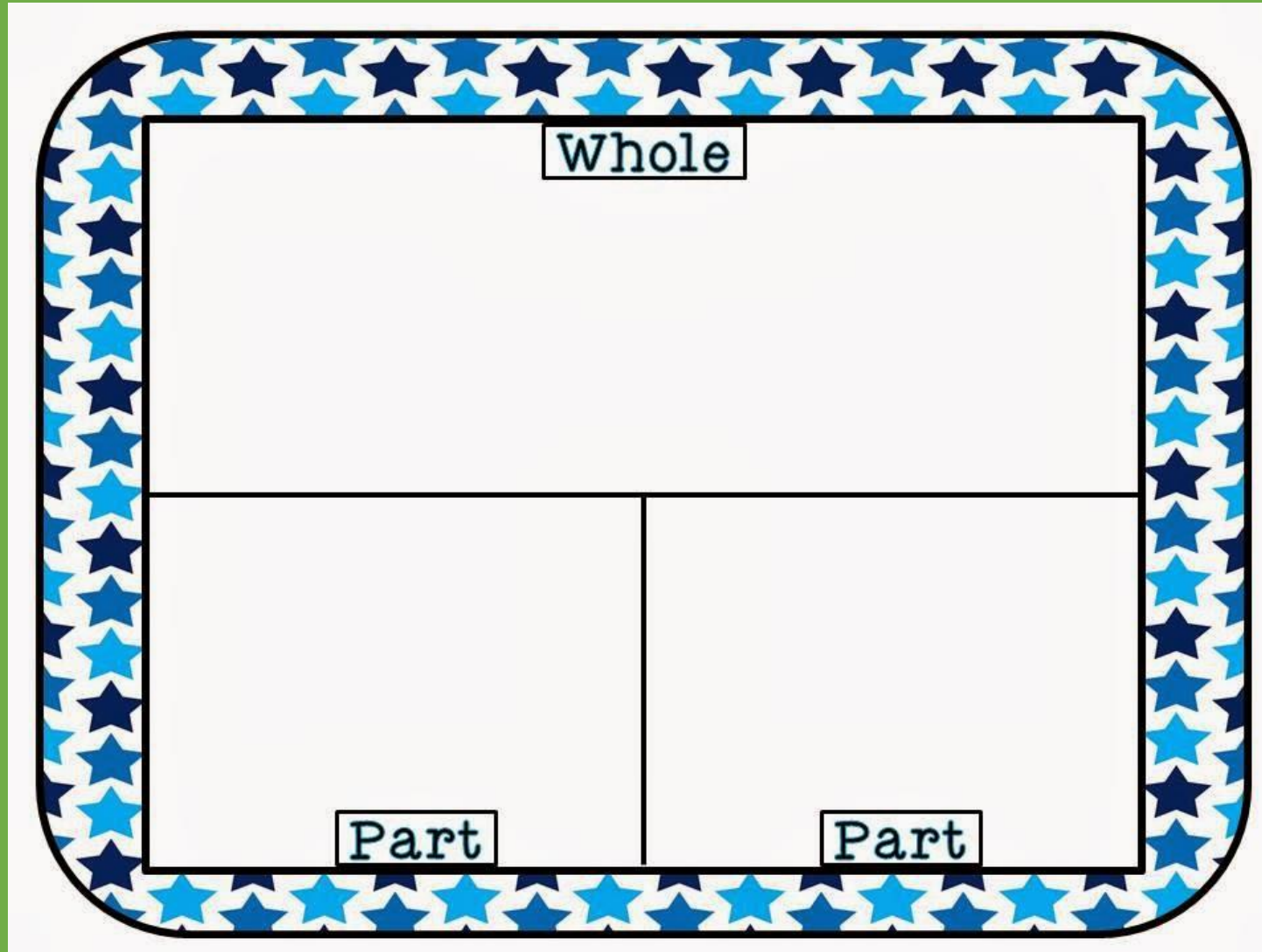
$$8 + 1 = 9$$



$$5 + 4 = 9$$

$$3 + 3 + 3 = 9$$

Part Whole Constructions



Partitioning Activities

Bunny Ears



Break it

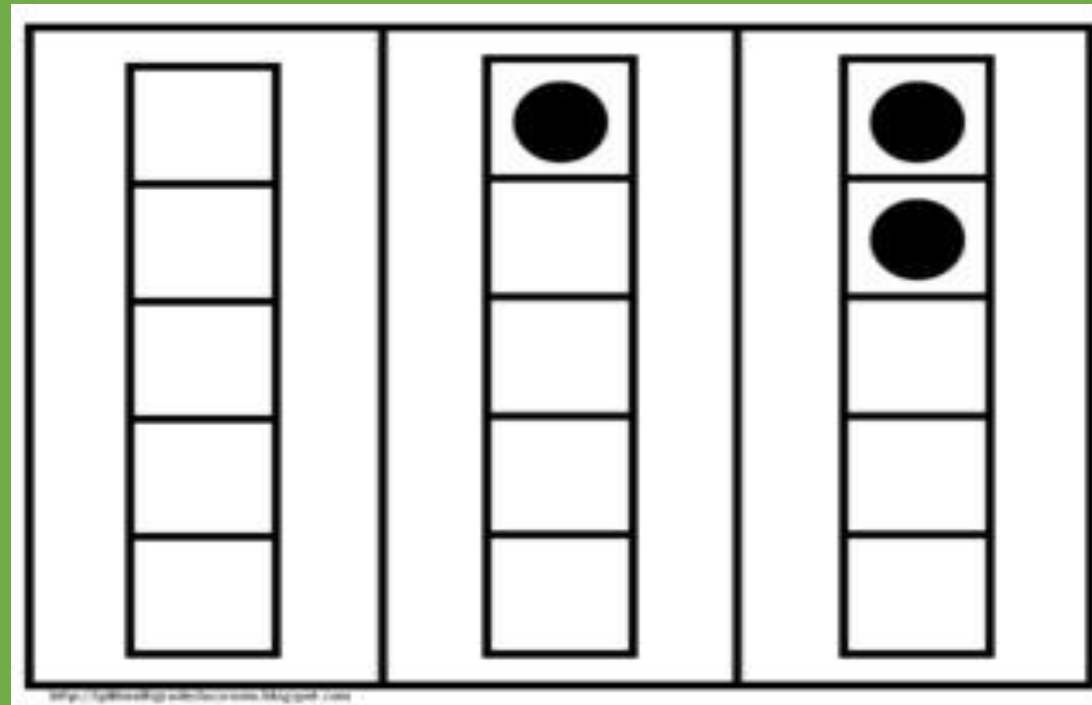
Missing Addend

$$3 + 4 = \square \qquad 3 + \square = 7$$

*You have 3 teddies. You get 4 more for your birthday.
How many altogether?*

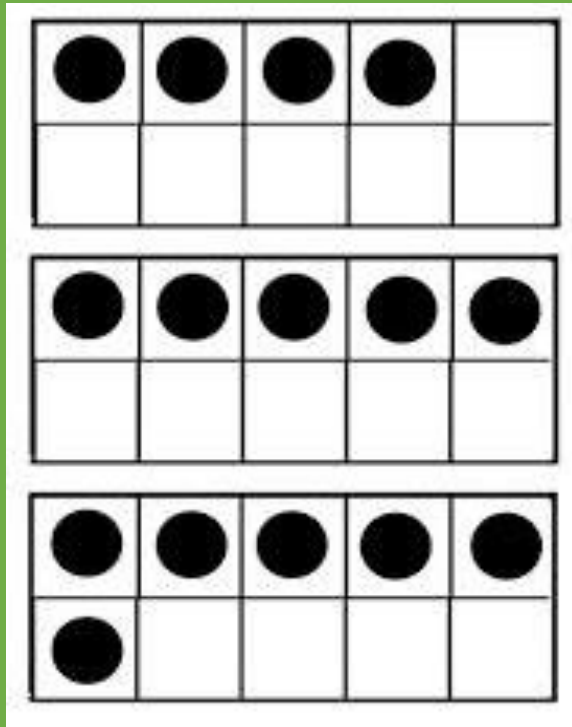
*You have 3 teddies. You get some more for your
birthday and now you have 7. How many did you get
for your birthday?*

5 Frames

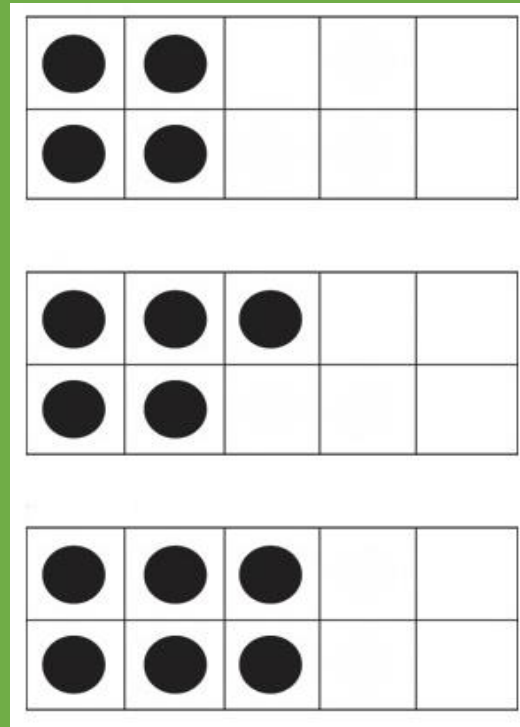


10 Frames

Five Wise



Pairs Wise



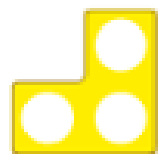
Numicon



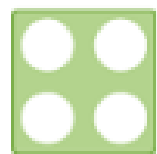
1



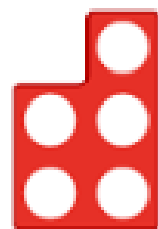
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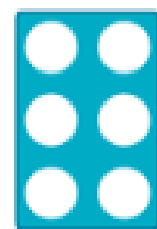
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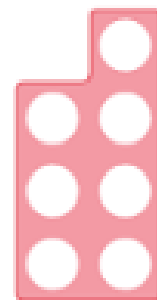
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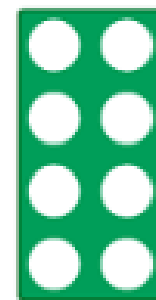
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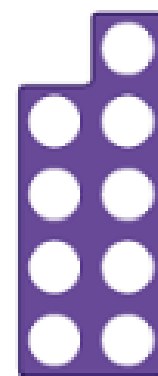
6



7



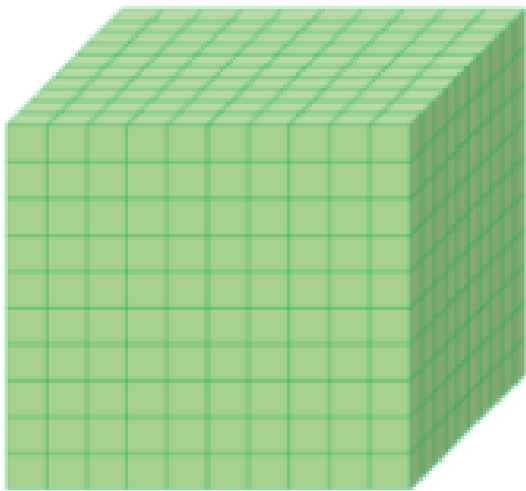
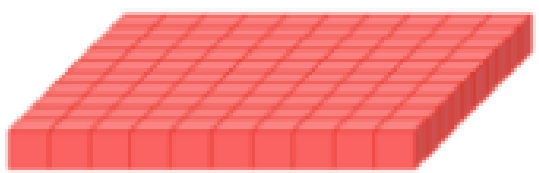


8



9



10

Thousands	Hundreds	Tens	Units/Ones
<p>Cube</p>  <p>1000</p>	<p>Flat</p>  <p>100</p>	<p>Rod</p>  <p>10</p>	<p>Unit</p>  <p>1</p>

Play opportunities in core provision ...

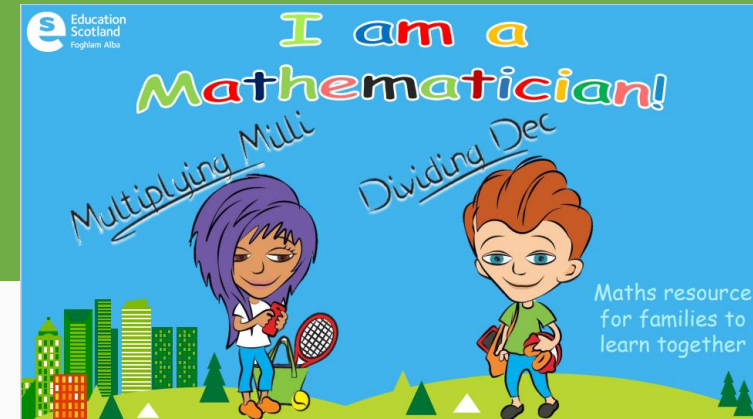
Core Provision

sand
water
clay
junk modelling
painting
drawing space
woodwork bench
computers (ICT)
small world
home corner
writing table
construction (block play)

Health & Wellbeing
Maths & Numeracy
Literacy & English

dough
clay
snack
library
listening centre
quiet space
dolls house
dressing up
role play area
music
rocking horse
outdoor space

Supporting Numeracy at Home ...



Read, Write, Count

Read, Write, Count aims to build parents' confidence, and encourage families to include easy and fun reading, writing and counting activities in their everyday lives

BITESIZE

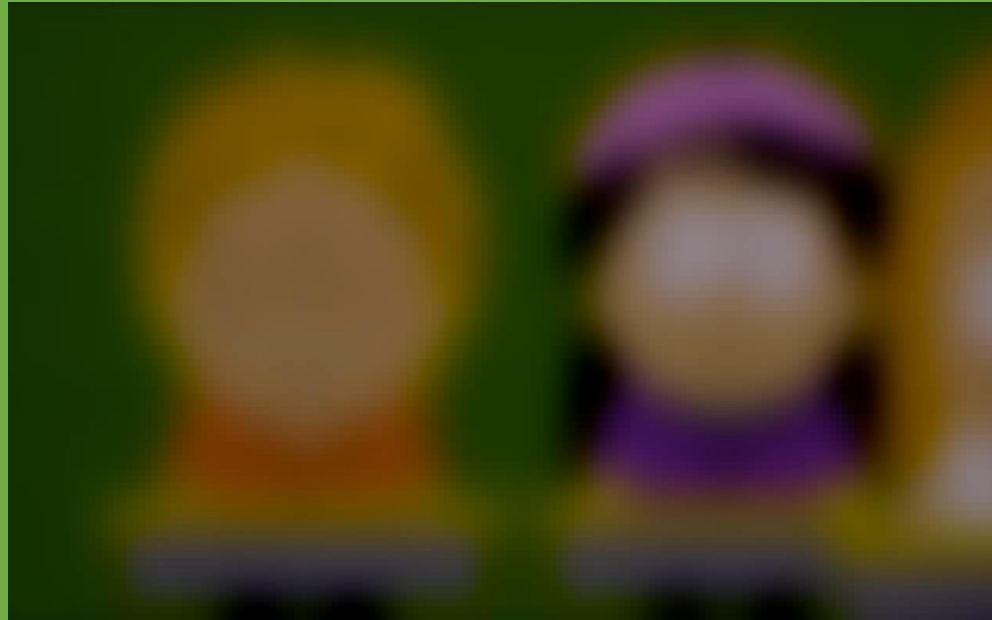
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[Early level](#)

Maths and Numeracy

Part of [Learn & revise](#)

Attitudes to Maths



What informs our attitudes to maths?

How may this affect learning and teaching in number?