Glasgow Counts in our Playrooms

THE SCOTTISH ATTAINMENT CHALLENGE
LITERACY NUMERACY
HEALTH & WELLBEING

Glasgow's Improvement Challenge
Unlocking Learning

Professional Learning gtc SCOTLAND 2018 EXCELLENCE AWARD

Awareness of Number:

Counting and Subitising 1

2023/2024

Aims

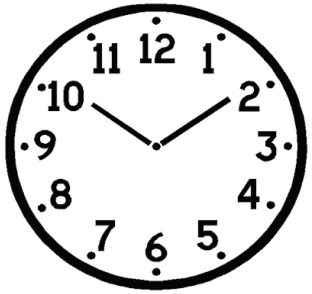
- To increase knowledge and understanding of **subitising** and the **five principles of counting.**
- To continue to explore the Glasgow Counts Framework
- Identify links with key documents

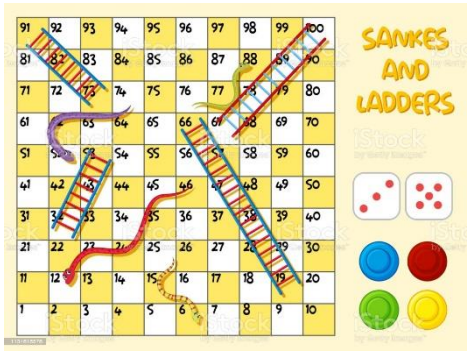
'Research shows that children who have a good start in mathematical understanding in early years make better progress in school mathematics'

Aubrey and Godfrey 2003

Numbers

What do we use numbers for?




SNAKES
AND
LADDERS

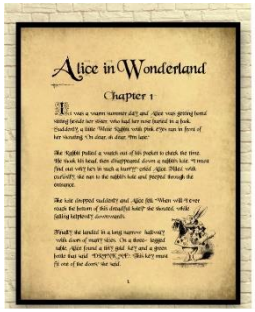

2021 Calendar
January
February
March
April
May
June
July
August
September
October
November
December


Team name
VS
Team name
2
3
shutterstock


10421
Join
The Race
for Life
raceforlife.org


50%
OFF

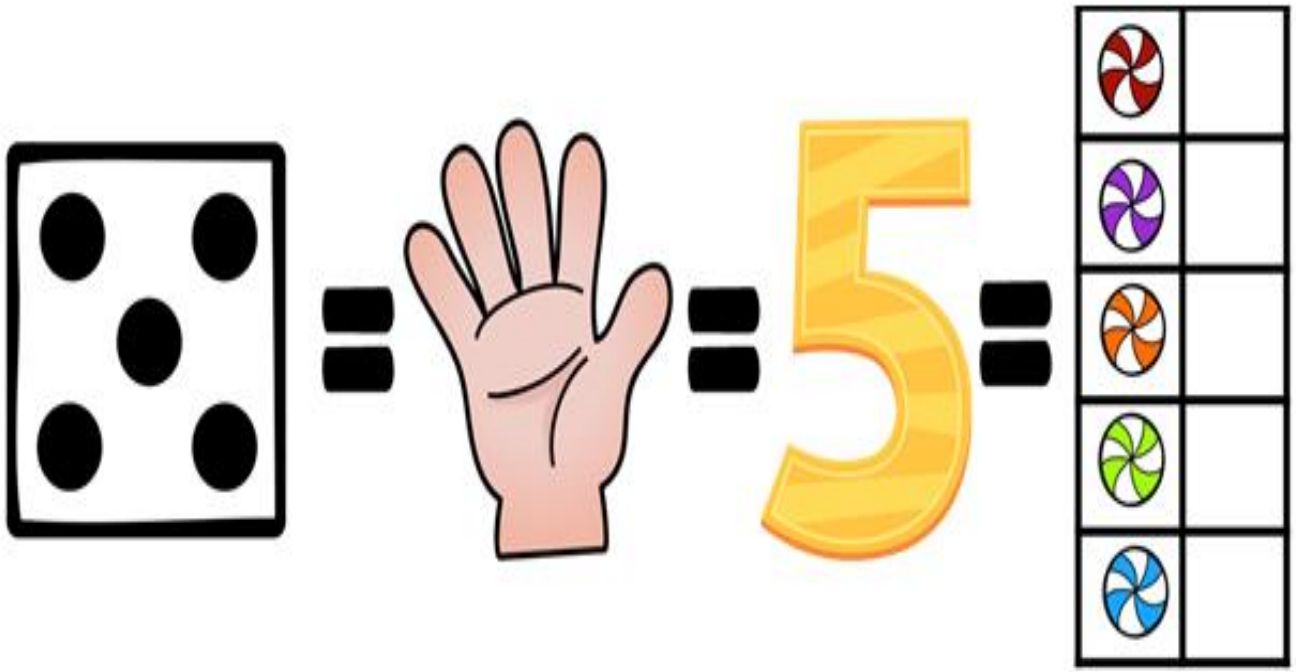

1 Liter
1000 cm
900
800
700
600
500
400
300
200
3/4
1/2
1/4
1/8


Alice in Wonderland
Chapter 1


OX65 AWD


38

Subitising



The ability to see how many without counting

Comes from the Latin word meaning ‘suddenly’

Very young babies can tell the difference between groups of dots

What is subitising?

Young children have powerful visual memories

Subitising helps children build images for numbers, to visualise and to learn number facts

Essential part of developing number sense

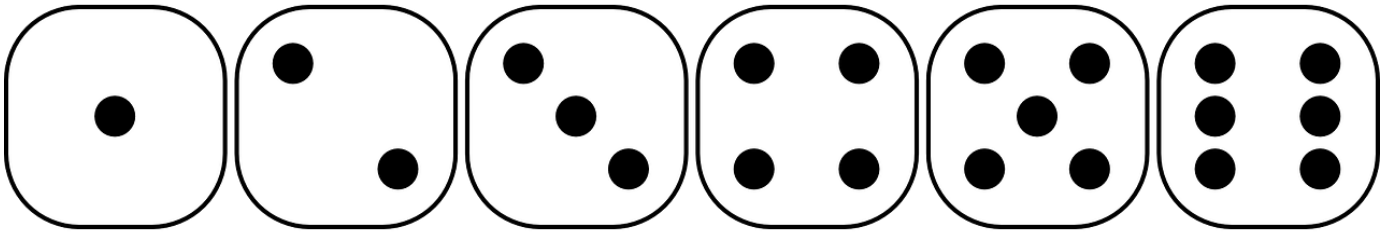
Early Level Tracker 1

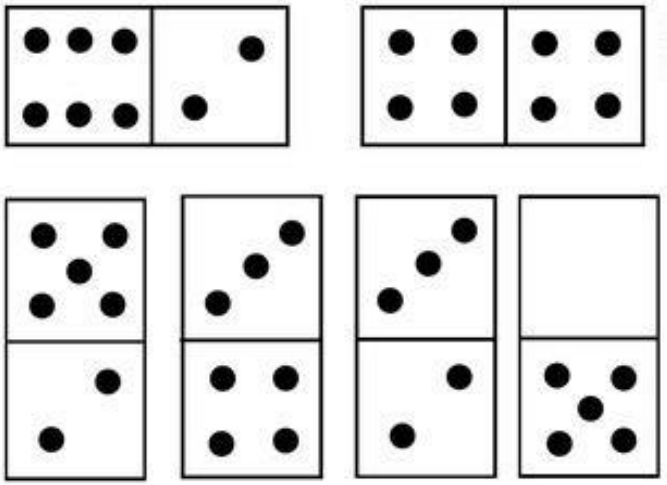
Estimation & Rounding		Knows they can check estimates by counting within 0-10		Can apply subitising skills to estimate the number of items in a set			Uses the language of estimation, including more than, less than, fewer than and the same	
Awareness of Number – Counting, Quantities & Number Structure	No. word sequences	Say short forward and backward number word sequences within 0-10		Uses ordinal numbers in real life contexts e.g. I am first/second/third in the line'			Recalls the number sequence forwards and backwards within 0-10	
	Numerals	Recognise numerals e.g. points to the number from 0-10	Identify (name) numerals e.g. can respond to question 'what is that number?' from 0-10	Explains zero is represented as 0	Orders numerals forwards and backwards within 0-10		Identifies number before, after and missing numbers in a sequence within 0-10; beginning to use the language before, after and in-between	
	Subitising	Identifies 'how many?' in regular dot patterns e.g. dot arrangement/on fingers/five frames/10 frames/dice without counting up to 6		Identifies 'how many?' in irregular dot patterns e.g. dot arrangement/on fingers/five frames/10 frames/dice without counting up to 6			Represents amounts in different arrangements e.g.dot arrangement/on fingers/five frames/ 10 frames/dice without counting up to 6	
	Counting	When counting objects understands the order in which we say the numbers is always the same (stable order)	Touch counts one item when each number word is said (1-to-1 correspondence)	When counting objects understands that the number name of the last object counted is the name given to the total number of objects in a set (cardinal principle)	When counting objects understands that the number of objects is not affected by position (order irrelevance)		Counts objects in a set recognising that the appearance of the objects has no effect on the overall total within 0-10 (conservation)	Counts anything e.g. objects at a distance/in a book/sounds/claps within 0-10 (abstract principle)
	Place Value	Explains that zero means there is none of a particular quantity			Partitions quantities to 10 into 2 or more parts and recognises that this does not affect the total e.g. 6 as 3 and 3/2 and 2 and 2			
Addition and Subtraction		Sorts & classifies objects using quantity as an attribute e.g. sets of 1, 2 within 0-10	Compares 2 sets to decide which has the fewest/most within 0-10	Finds the total when 1,2 or 3 is added to an existing amount e.g. a number line or height chart (augmentation)	Finds the total when 2 sets are added together within 0-10 (aggregation)	Finds out how many are left when 1 or 2 are taken away within 0-10	Compares to find the difference between sets as a quantity within 0-10	Beginning to count on and back in ones to add and subtract with objects or number line within 0-10
Multiplication and Division		Shares out a group of items into 2 equal sets within 0-10. Groups objects into matching or natural sets of 2 e.g. shoes within 0-10			Begin to identify halves and doubles using concrete materials within 0-10			
Fractions, Decimals and %		Identifies wholes and halves in a social context and uses appropriate language e.g. 'I have eaten half of my banana'		Splits a whole into smaller parts and explains that equal parts are the same size			Understands that a whole can be shared equally and unequally	

Early Level Tracker 1

Identifies 'how many?' **in regular** dot patterns e.g. dot arrangement/on fingers/five frames/10 frames/dice without counting up to 6
Identifies 'how many?' **in irregular** dot patterns e.g. dot arrangement/on fingers/five frames/10 frames/dice without counting up to 6
Represents amounts in different arrangements e.g.dot arrangement/on fingers/five frames/ 10 frames/dice without counting up to 6

Teaching subitising





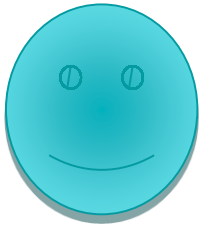
Subitising

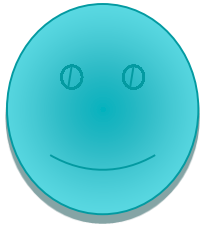
Start with patterns In order

1

Subitising

2



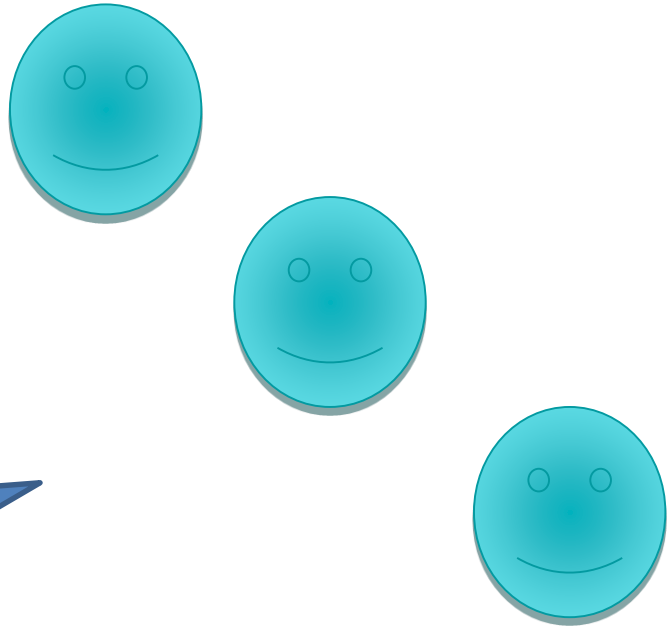


What do you see?

How do you see it?

Regular / Domino Patterns

What do you see?



3

How do you see it?

Regular / Domino Patterns

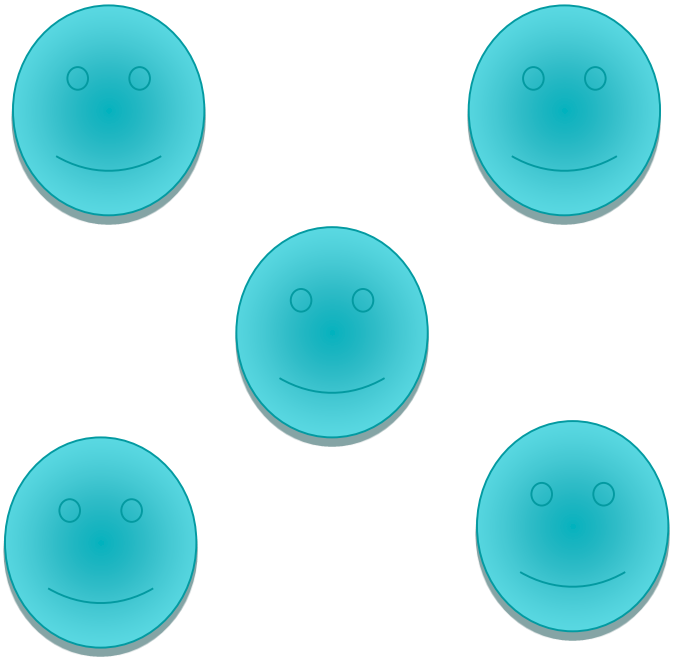
What do you see?

4

How do you see it?

Regular / Domino Patterns

What do you see?



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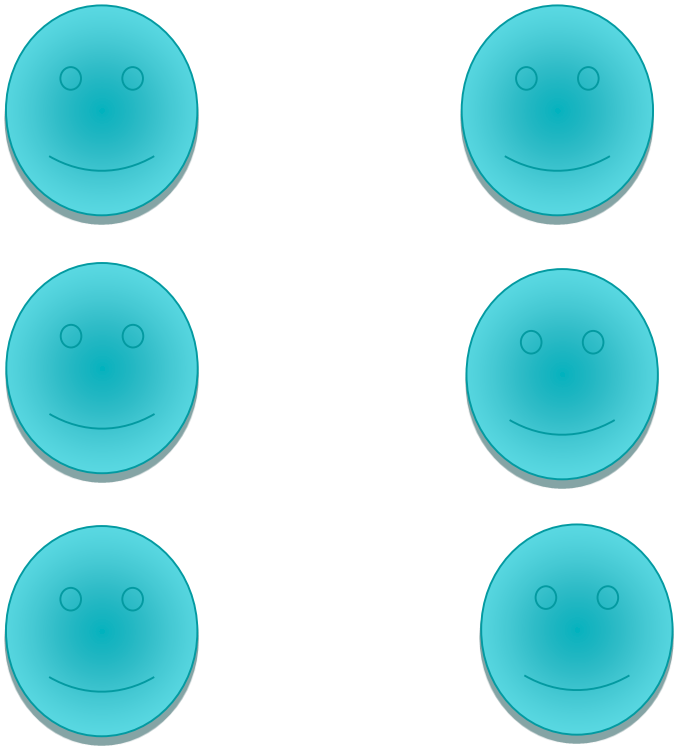
How do you see it?

Regular / Domino Patterns

What do you see?

How do you see it?

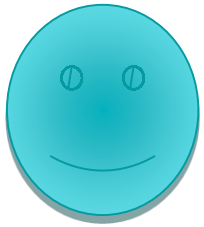


6

Random Dot Patterns

2

Random Dot Patterns



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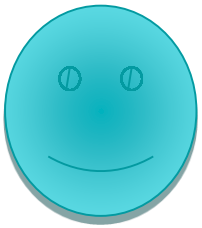
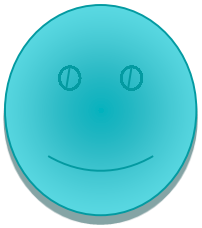
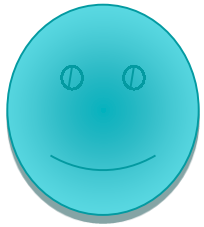
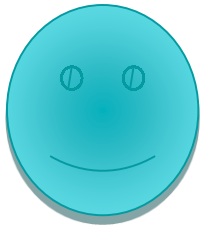




Random Dot Patterns

4





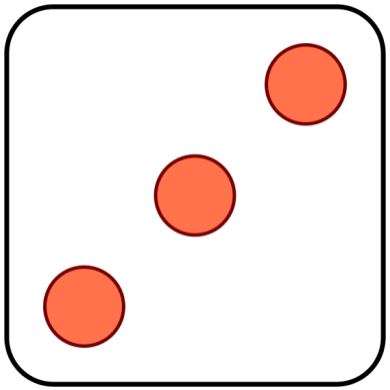
Random Dot Patterns

5

Random Dot Patterns

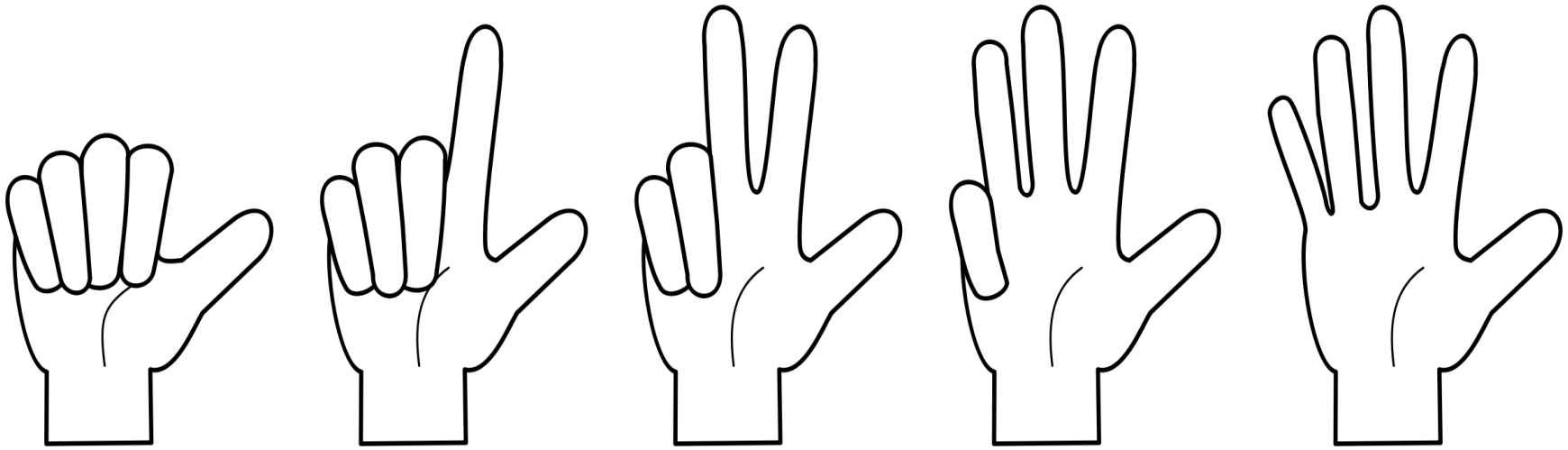
6

Subitising



Subitising

Finger Patterns –Grow, Show, Throw



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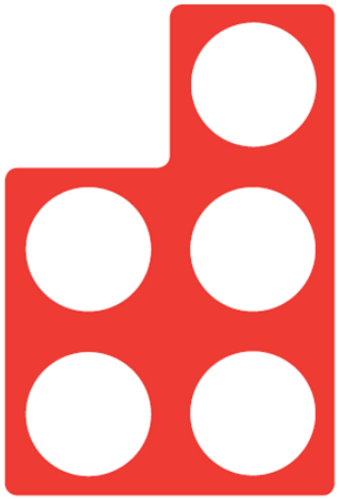
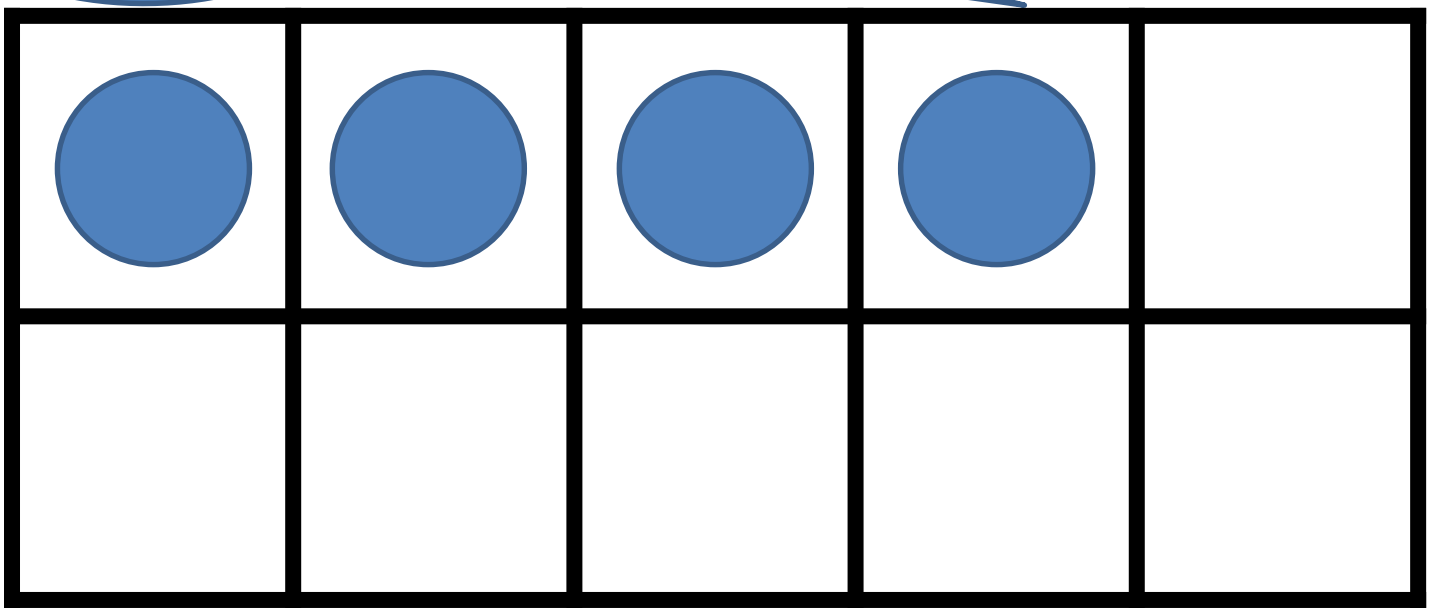


Subitising

10 Frames - Arrays

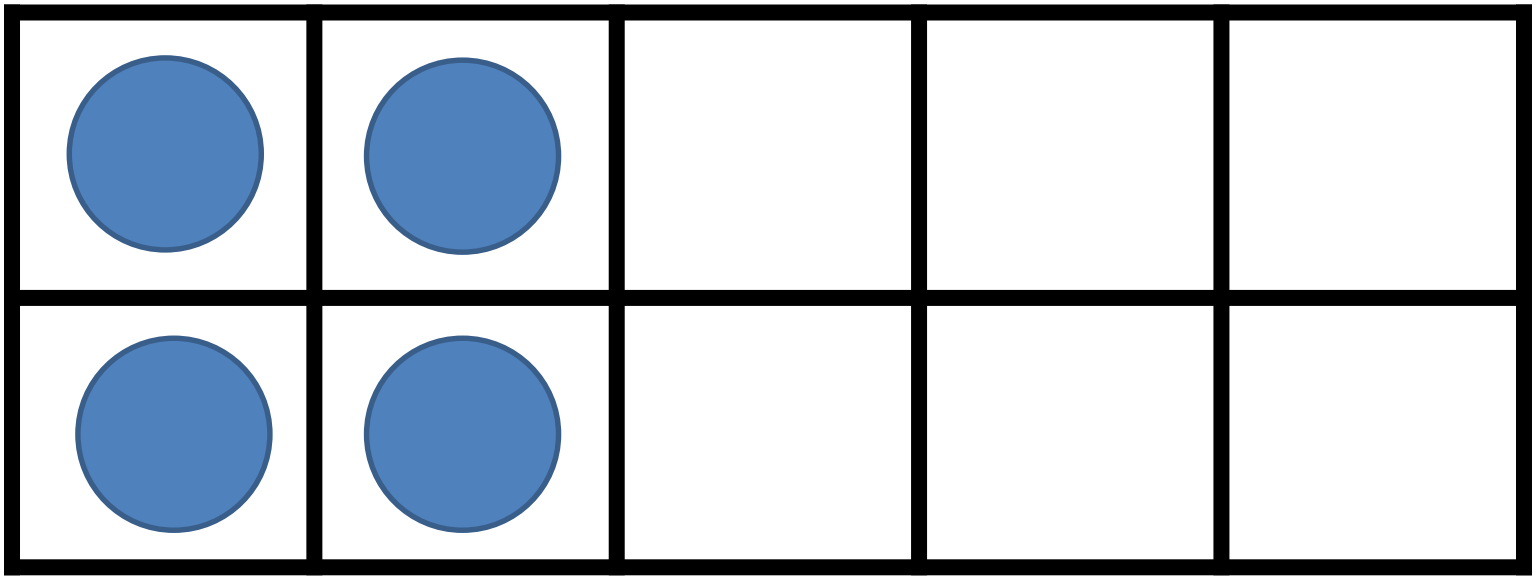
What do you see?



Subitising

What do you see?

10 Frames - Arrays



Subitising

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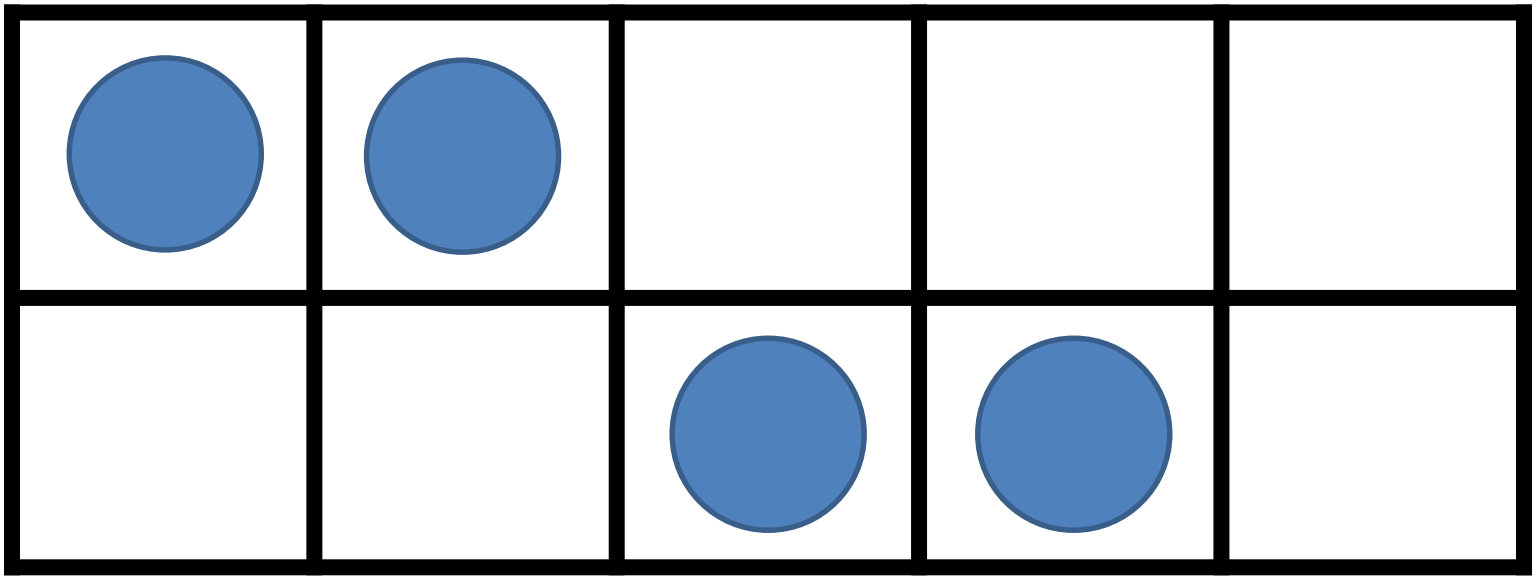

Subitising

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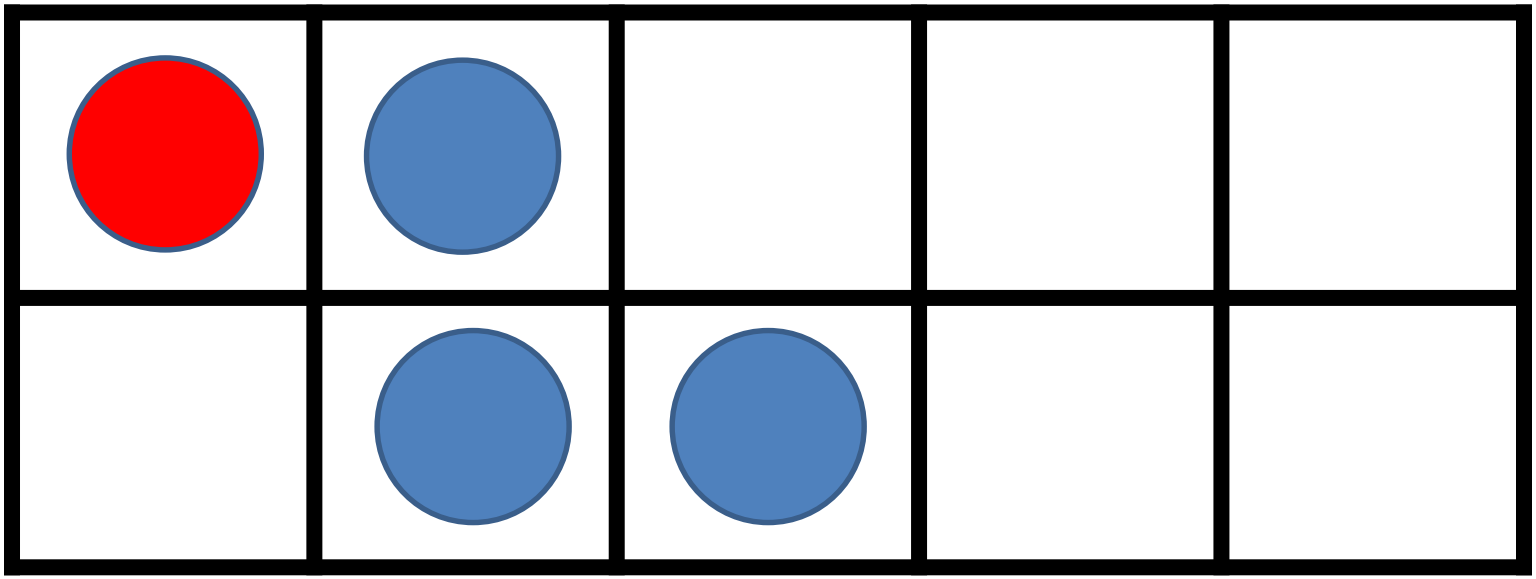
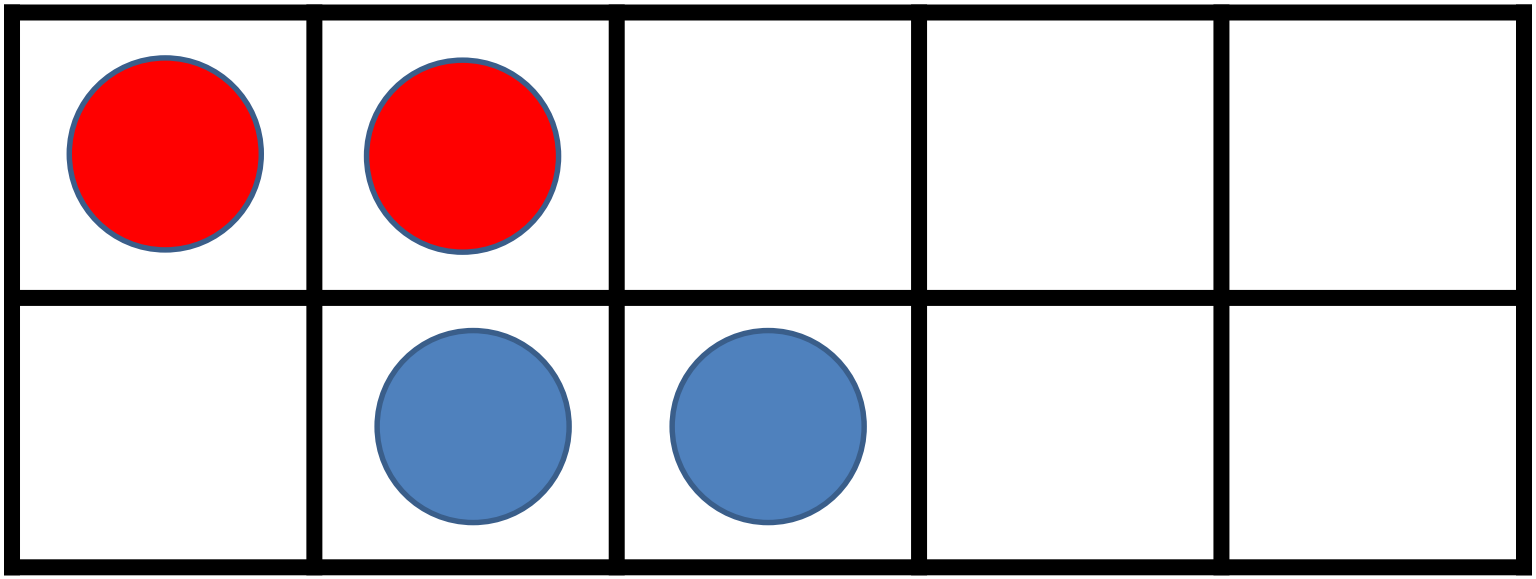
10 Frames - Arrays



Subitising

What do you see?

10 Frames - Arrays



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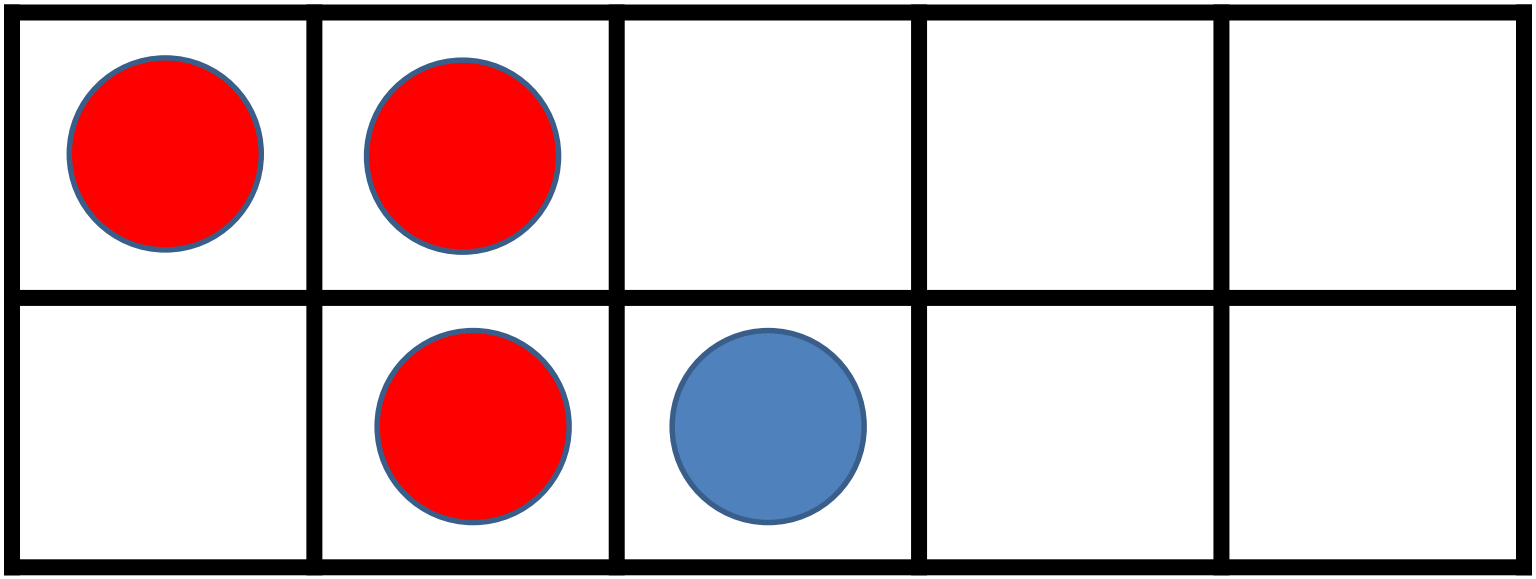

Subitising

What do you see?

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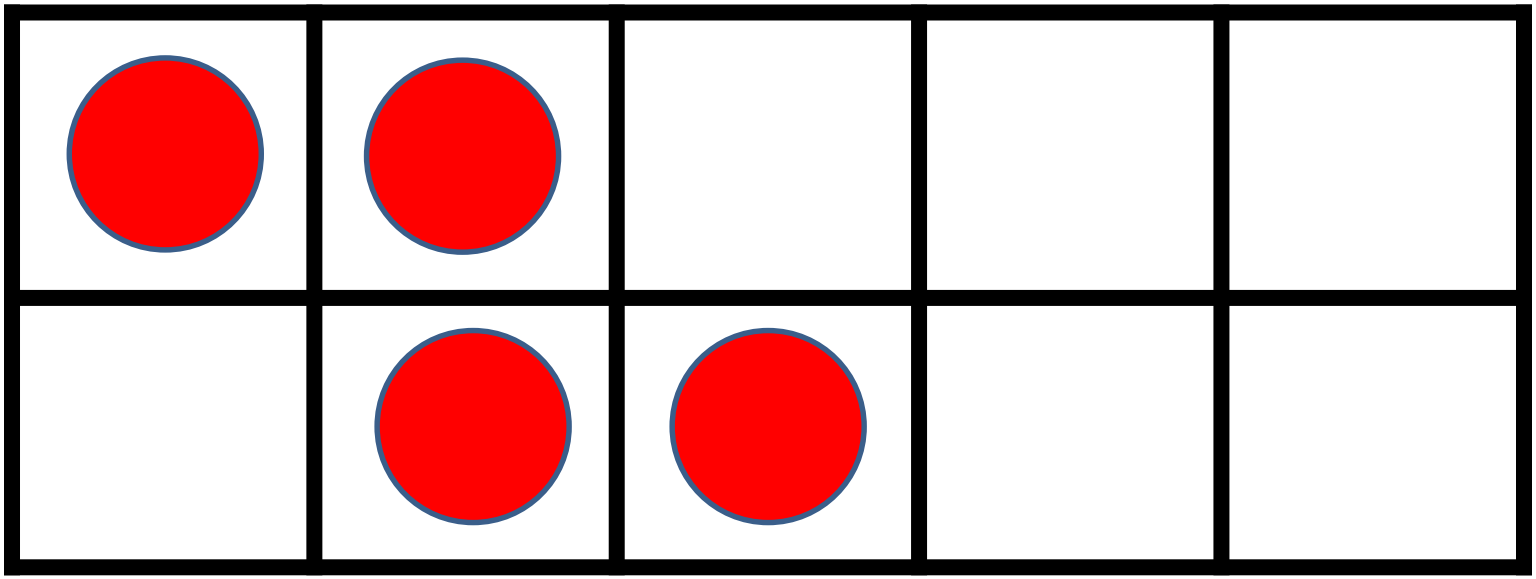

Subitising

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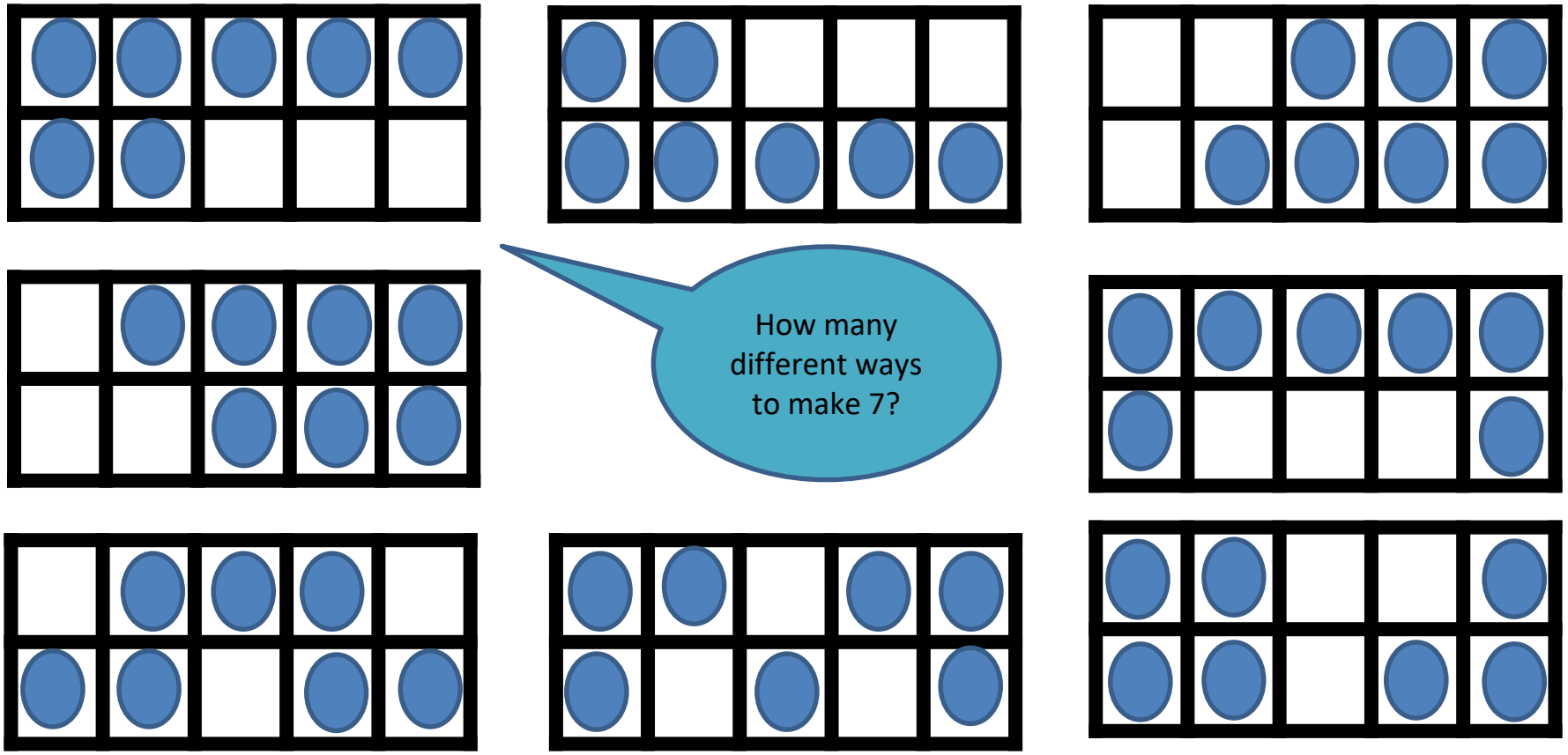

Subitising

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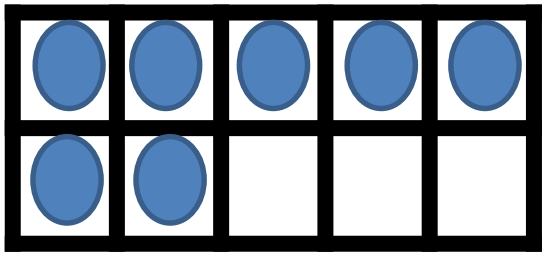
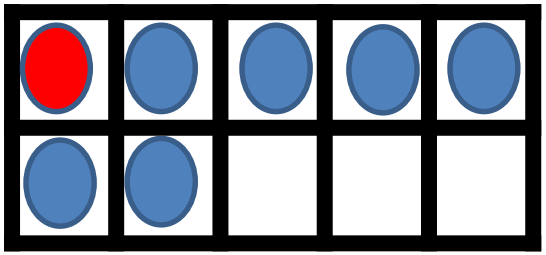
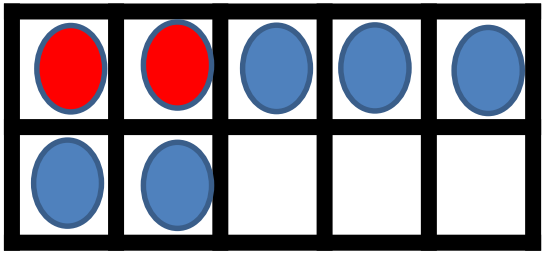
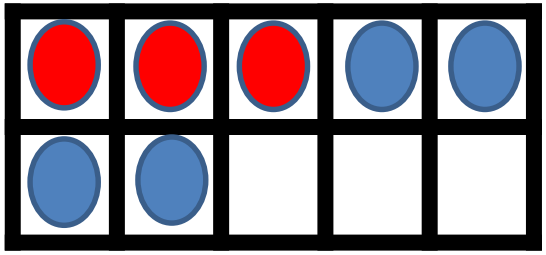
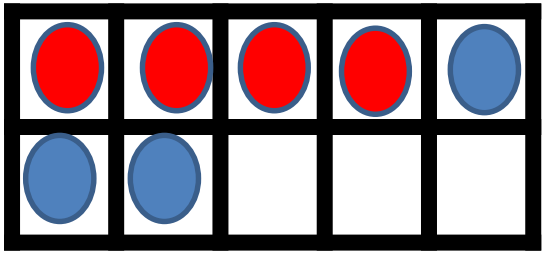
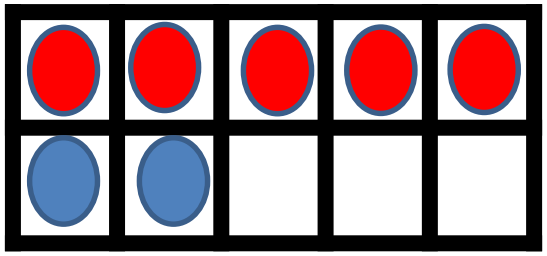
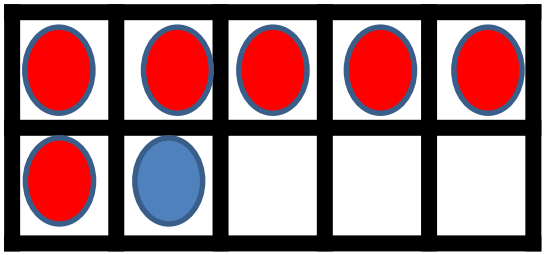
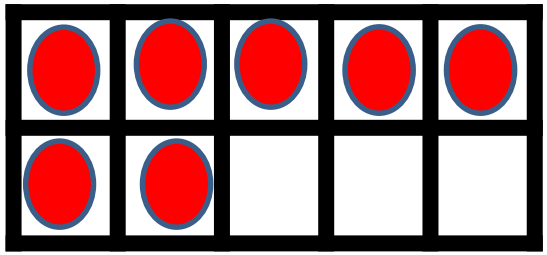









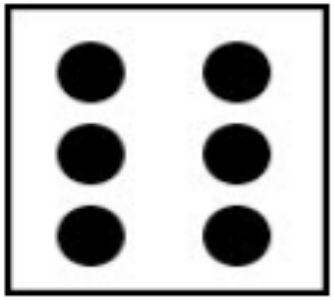
What do you see?

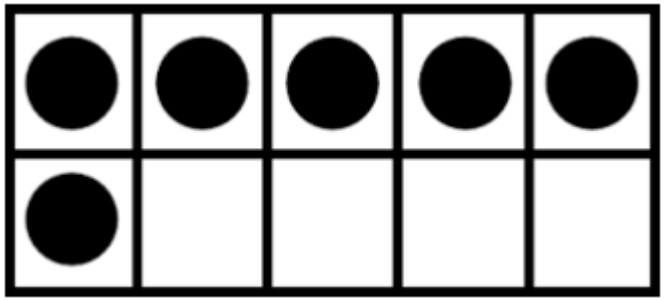
Subitising

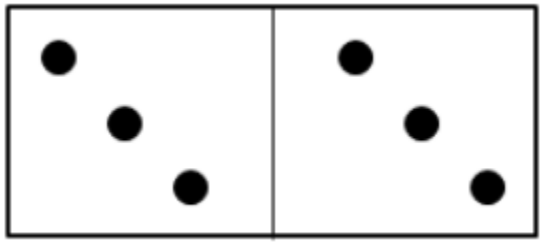

all
Days of the Week
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday

Subitising

6





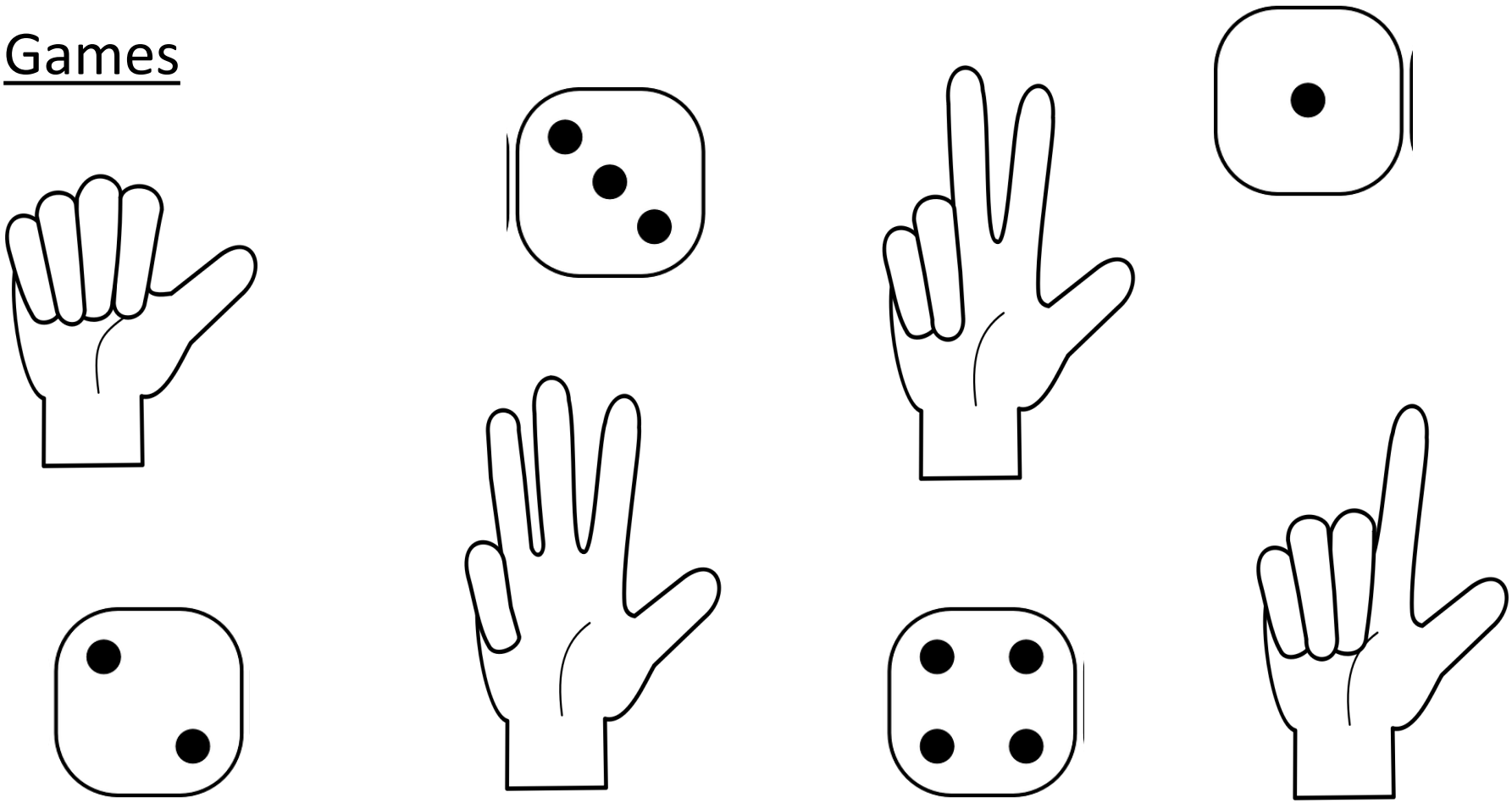


Subitising

Games

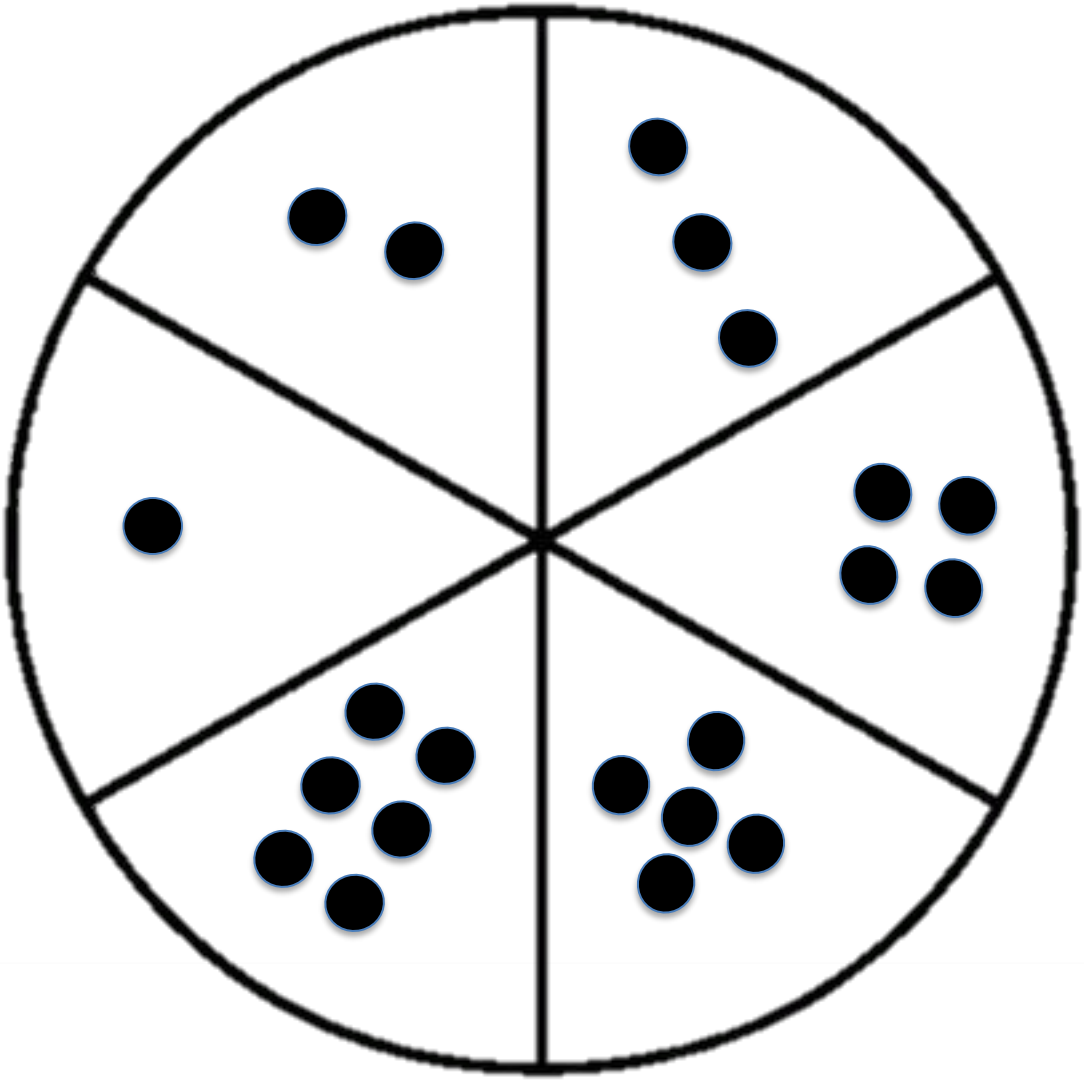
Subitising

Games



Subitising

Games



Subitising

Games

Subitising

Games

Subitising: Early Level

Language How many, dots, patterns, objects, dice, domino, five frame, ten frame, array, tell me what you see

CfE MNU 0-01a, MNU 0-02a

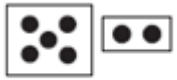
Strategies and Approaches

Subitising is an essential part of developing number sense. By looking at a group of items, children can start to develop an understanding of how a number is made up (https://valeriefaulknermathclub.files.wordpress.com/2017/05/faulkner_ainslie_proof.pdf)

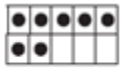
Perceptual Subitising *is the amount you can instantly recognise without counting. We do this 'naturally' from a young age. It becomes difficult to process the 'full amount' beyond 5 or 6. Beyond 6 you will apply conceptual subitising skills to chunk what you see into smaller values.*

Conceptual Subitising *chunks a larger amount into smaller values. Beyond 6 your mind will process a larger amount e.g. 7 as 5 and 2 or 3 and 4 depending on the representation. This is made possible if the amounts are arranged in an organised way. Therefore effective conceptual subitisers need to be taught to organise their amounts into regular patterns, and 5/10 frames, to make subitising possible. Irregular arrangements are far harder to see and should only be used within 5. Beyond 5 or 6 children will need to adopt regular arrangements to see the amount.*

irregular arrangements



regular arrangement



10 frame

- **Fingers:** Use fingers everyday to represent quantities. What do you see? How do you know? Can you grow the number adding a finger at a time? Challenge children e.g. make 5 using 2 hands in different ways.
- **Dot arrangements:** Look for everyday opportunities for learners to see and organise regular structured representations of numbers e.g. objects or dots organised on a five frame or a ten frame, Numicon, dominos , playing cards, an abacus and dice: dice/dominoes/five/ten frames/counters Children should be familiar with all of these ways of seeing patterns of numbers for example by:
  - Playing board games, dominos , cards games and snap games
  - Registering attendance on a five or ten frame/ voting for preferences on the five or ten frame
  - Recording who has had snack on a ten frame, ordering at the 'bakery' on a five or ten frames
- Ordering regular and irregular patterns, on a subitising washing line for example, will give learners the opportunity to show they understand the dot patterns represent increasing amounts.

Resources

Digital Learning

Questions to Enable Higher Order Thinking

- Can you show me your age using your fingers?
- Can you show me 4 using finger patterns? Can you make it in a different way
- How many on each hand?
- How many circles did you see in the picture?
- Can you tell me without counting?
- What other groups of circles did you see?
- Tell me what you see

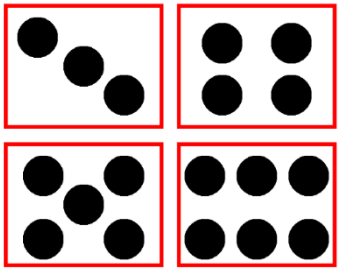
Barriers to Learning and Misconceptions

- The spatial arrangement of sets influences how difficult they are to subitise. Children usually find rectangular arrangements easiest, followed by linear, circular, and scrambled arrangements
- If children have poor skill development with number word sequences – ability to say numbers in the correct order, they will find subitising difficult
- Inability to identify and match objects seen with associated number name
- Inability to count on – when subitising more than one group

On Track at Transition Statement

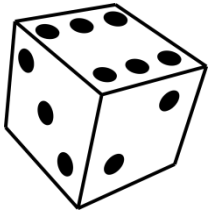
- Represents amounts in different arrangements e.g.dot arrangement/on fingers/five frames/ 10 frames/dice without counting up to 6

Dominos, dice and playing cards



I see four

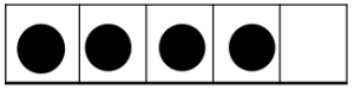
What else do you see?



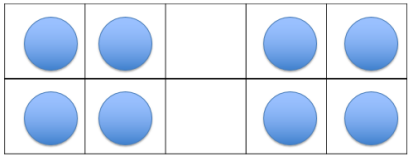
Irregular pattern cards and games

An open frame where children can create their own patterns

Using a five/ten frame create structured patterns



How many altogether?



How many different ways to make 8?

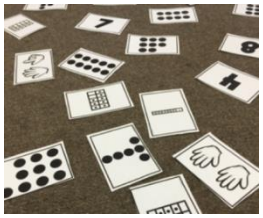
How many children are here today?

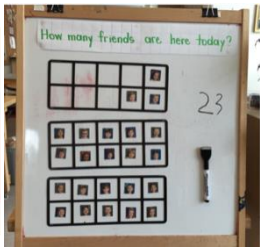
Noticing patterns in nature/real world

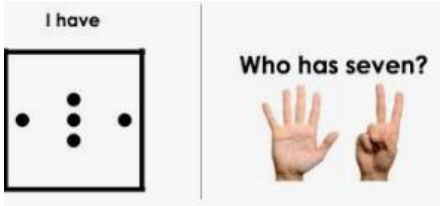
Resources – Subitising

Common Learning Resources

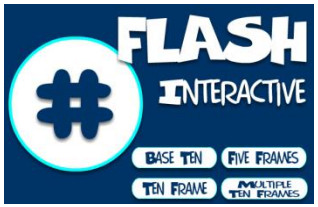
- Sets of counters and objects placed in different arrangements
- Dice
- Dominos
- Subitising cards
- Subitising stones
- Rekenrek
- Children's fingers
- Playing cards







Online Resources



Hidden Jewels
Age 3 to 5

Saying how many there are without counting

Stories

- *Ten Black Dots* by Donald Crews
- *The Very Hungry Caterpillar* by Eric Carle
- *Night Light* by Nicholas Blechman
- *Dog's Colourful Day* by Emma Dodd
- *My Very First Book of Numbers* by Eric Carle
- *Ten Little Rubber Ducks* by Eric Carle
- *How Many Snails?:* A Counting Book

Five Principles of counting

Five Principles of counting

Stable Order

1 – to –1 correspondence

Cardinal

Order irrelevance

Abstract

Five Principles of counting

Stable Order

When counting objects understands the order in which we say the numbers is always the same

1 – to –1 correspondence

Touch counts one item when each number word is said

Cardinal

When counting objects understands that the number name of the last object counted is the name given to the total number of objects in a set

Order Irrelevance

When counting objects understands that the number of objects is not affected by position

Abstract

Counts anything e.g. objects at a distance/in a book/sounds/claps within 0-10

Early Level Tracker 1

Estimation & Rounding		Knows they can check estimates by counting within 0-10		Can apply subitising skills to estimate the number of items in a set		Uses the language of estimation, including more than, less than, fewer than and the same	
Awareness of Number – Counting, Quantities & Number Structure	No. word sequences	Say short forward and backward number word sequences within 0-10		Uses ordinal numbers in real life contexts e.g. I am first/second/third in the line'		Recalls the number sequence forwards and backwards within 0-10	
	Numerals	Recognise numerals e.g. points to the number from 0-10	Identify (name) numerals e.g. can respond to question 'what is that number?' from 0-10	Explains zero is represented as 0	Orders numerals forwards and backwards within 0-10	Identifies number before, after and missing numbers in a sequence within 0-10; beginning to use the language before, after and in-between	
	Subitising	Identifies 'how many?' in regular dot patterns e.g. dot arrangement/on fingers/five frames/10 frames/dice without counting up to 6		Identifies 'how many?' in irregular dot patterns e.g. dot arrangement/on fingers/five frames/10 frames/dice without counting up to 6		Represents amounts in different arrangements e.g.dot arrangement/on fingers/five frames/ 10 frames/dice without counting up to 6	
	Counting	When counting objects understands the order in which we say the numbers is always the same (stable order)	Touch counts one item when each number word is said (1-to-1 correspondence)	When counting objects understands that the number name of the last object counted is the name given to the total number of objects in a set (cardinal principle)	When counting objects understands that the number of objects is not affected by position (order irrelevance)	Counts objects in a set recognising that the appearance of the objects has no effect on the overall total within 0-10 (conservation)	Counts anything e.g. objects at a distance/in a book/sounds/claps within 0-10 (abstract principle)
	Place Value	Explains that zero means there is none of a particular quantity			Partitions quantities to 10 into 2 or more parts and recognises that this does not affect the total e.g. 6 as 3 and 3/2 and 2 and 2		
Addition and Subtraction		Sorts & classifies objects using quantity as an attribute e.g. sets of 1, 2 within 0-10	Compares 2 sets to decide which has the fewest/most within 0-10	Finds the total when 1,2 or 3 is added to an existing amount e.g. a number line or height chart (augmentation)	Finds the total when 2 sets are added together within 0-10 (aggregation)	Finds out how many are left when 1 or 2 are taken away within 0-10	Compares to find the difference between sets as a quantity within 0-10	Beginning to count on and back in ones to add and subtract with objects or number line within 0-10
Multiplication and Division		Shares out a group of items into 2 equal sets within 0-10. Groups objects into matching or natural sets of 2 e.g. shoes within 0-10			Begin to identify halves and doubles using concrete materials within 0-10		
Fractions, Decimals and %		Identifies wholes and halves in a social context and uses appropriate language e.g. 'I have eaten half of my banana'		Splits a whole into smaller parts and explains that equal parts are the same size		Understands that a whole can be shared equally and unequally	

Stable Order

0, 1,2,3,4,5……

Numbers are recited
in the right order
(can be forward or backwards).

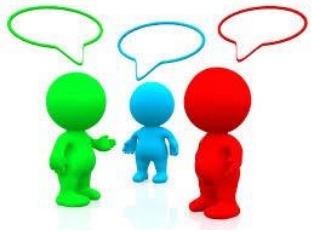
Stable-Order Principle

- Vocabulary – Number words zero to five, then ten…
- Experiences – Number rhymes, songs, games. Using gestures and movement along with sounds and visuals.
- Assessment – Consistently recite the number words in order.
- Key questions - Which number comes after (forwards)/before (backwards)?

Stable-Order Principle

- **<u>Questions to Enable Higher Thinking Skills</u>**

- Can you (help me) count on/back from 0 to 10?
- Can we/you take turns counting from 0 forwards to 8, 10 backwards to 3?
- What number comes next?
- I'm going to count down from seven. Can you tell me which number comes next?
- What number comes before/after 3?
- What number is missing?
- Can you help me count as we share out the grapes?
- Do we always say the numbers in the same order? Why?
- What would happen if we counted like this 1, 3, 8 (model a mistake)?
- As we jump forwards/backwards can we count out loud together?
- As we count the dots on the dice/move our piece, can we count out loud together?



1:1 Correspondence

Each object is counted only once.

One to One Principle

- Vocabulary – Number words zero to five, then to ten…
- Experiences – Moving objects when counting. Matching items to a picture. Helping to set the snack table.
- Assessment – Coordinates movement with the count. Can match one counting word to one action.
- Key questions- Can you count how many?

One to One Principle

Questions to Enable Higher Order Thinking

- Can you count the numbers on the dice?
- How can we make these stones easier to count?
- Can we line up in rows of 5 to brush our teeth?
- How many jaggy things are in the bag?

Cardinality

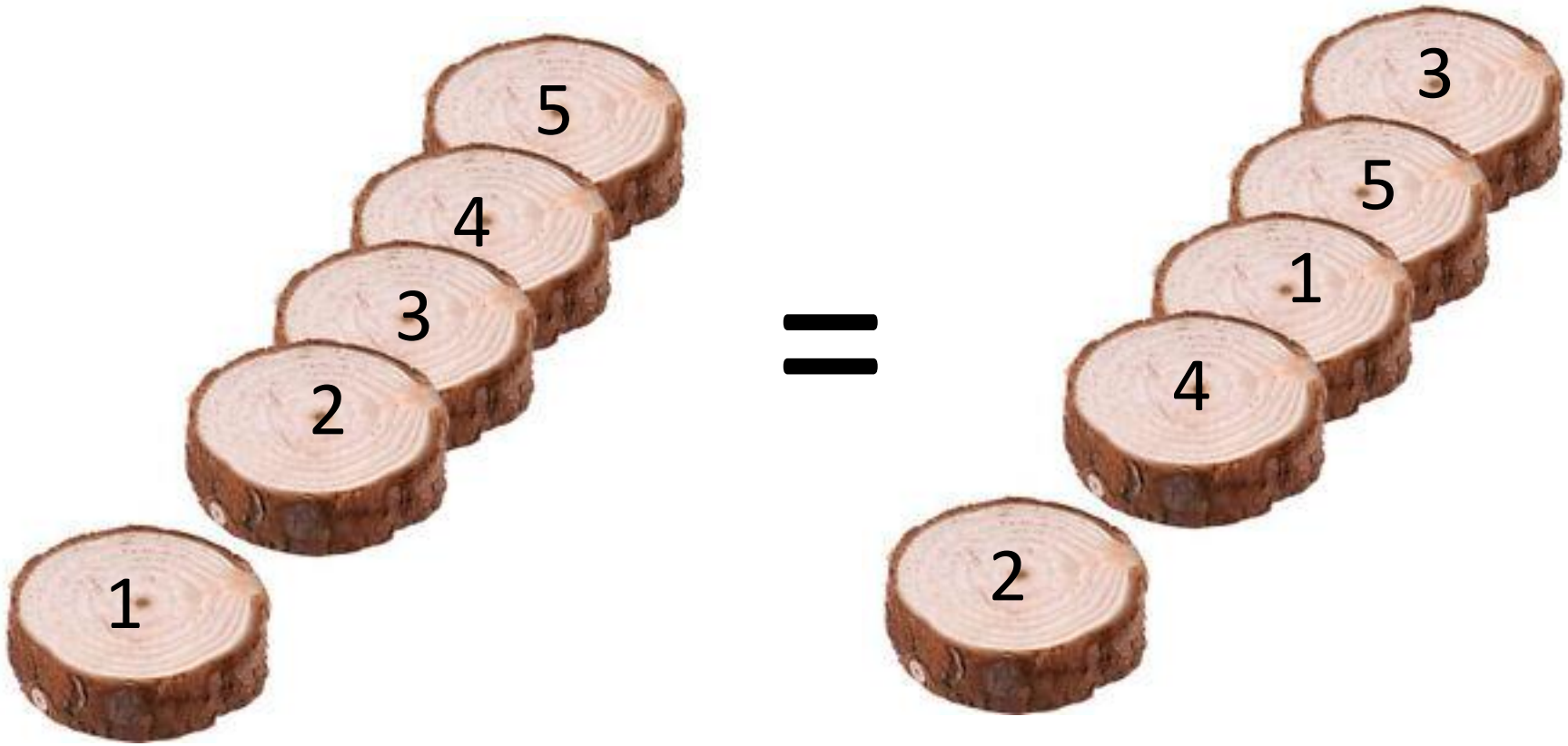
10

The last number you say is the total amount.

Cardinal Principle

- Vocabulary – Number words zero to five then 10…
- Experiences – Counting groups of objects.
- Assessment – Touch and count one to one.
  Use the counting names in order.
  Stop on the last number and recognise that it is the total.
- Key questions - How many do you have?
  How many did you count?

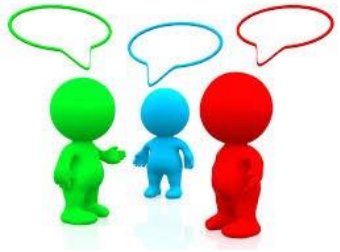
Order Irrelevance



The order you count the objects in does not matter (as long as you only count each object once).

The Order Irrelevance Principle

- Vocabulary – Number words zero to five then ten…
- Experiences – Counting sets of items from left to right, right to left, top to bottom, bottom to top.
  Counting sets of different coloured items or different objects.
- Assessment – Counts each item only once.
  Counts random arrangements.
- Key questions - How many are there?
  How many did you count?



Abstraction

5 claps

2 jumps

3 children

5 minutes

You can count anything: sounds, jumps, children….

The Abstraction Principle

- Vocabulary – Number words zero to five then to ten.
- Experiences – Counting sets of random objects.
- Assessment – Counting things that are not objects sounds, actions, steps.
- Key questions - I wonder if we can count these altogether?

Counting Organiser-
5 Principles of Counting

Stable Order

Numbers are recited
in the right order.
(Can be forward or backwards.

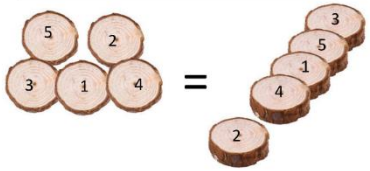
1:1 Correspondence

Each object is counted only once.

Cardinality

The last number you say is the amount.

Order Irrelevance

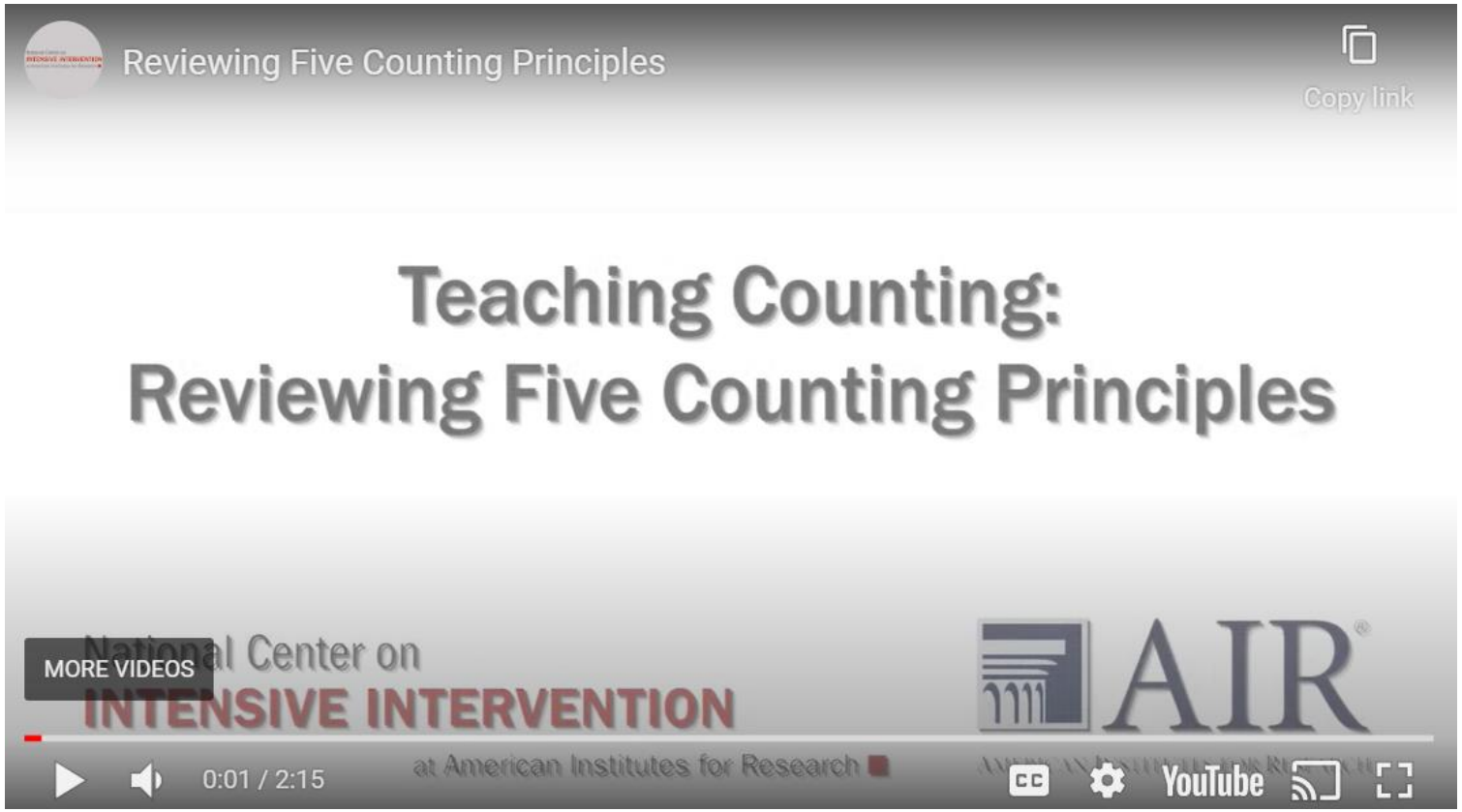


The order you count the objects in does not matter.
(As long as you only count each object once!)

Abstraction

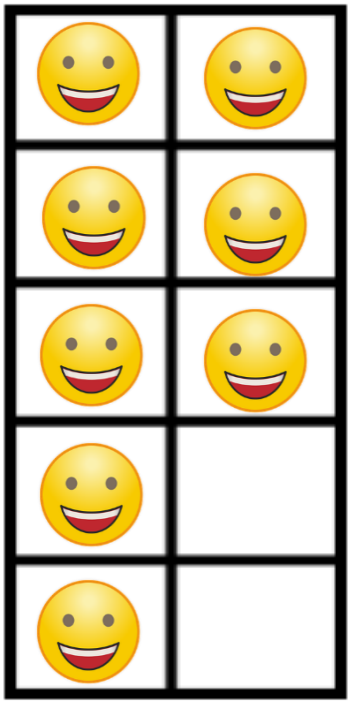
You can count anything: sounds,
jumps, children....

5 Principles of Counting



Principles of counting

In everyday contexts



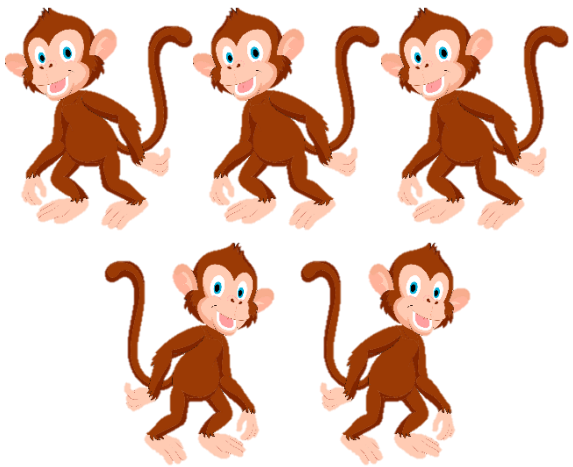
How many children are in today?

- Stable Order
- 1 – to –1 correspondence
- Cardinal
- Order Irrelevance
- Abstract

Principles of counting

In everyday contexts

5 Little Monkeys



- Stable Order
- 1 – to –1 correspondence
- Cardinal
- Order Irrelevance
- Abstract

Counting

Children need:

- a **purpose** for counting and **motivation** to count;
- **meaningful contexts** that make sense;
- to understand how numbers **relate** to each other;
- to make **connections**;
- to develop **positive attitudes** and **confidence**;
- to use the **language**…

Adapted from Early Mathematics: A Guide for Improving and Teaching and Learning 2016

Counting : Early Level

Language Count, set, items, collection, row, group, add, more, make, altogether

CfE MNU 0-01a
MNU 0-02a

Strategies and Approaches

All children are working towards understanding and using the 5 principles of counting (see https://blogs.glowscotland.org.uk/gc/gccleadersofearlylearning/files/2018/11/counting_a_deceptively_simple_skill.pdf)

Counting walks: take a walk to spot (make predictions beforehand) number of birds (including types), (blue) cars, post boxes, shops, dogs, buses, traffic lights, conkers, things with 4 wheels, pieces of litter, street signs etc. Make time to review how many things were spotted on return to the playroom.

Board games: encourage and model: predicting what number will be rolled, counting the dots on the dice once rolled and comparing with the prediction; counting aloud when moving the counter; thinking about what number is needed to get to a desired spot on the board; thinking aloud e.g. 'what do I need to get to the pig'; creating own board games; creating own dice with various arrangements e.g. only 1-5 or a mix of dots and numbers

Block Play/Water/Sand/Construction: encourage predicting and counting when building and creating. Model thinking aloud 'how many do I need' as well as actions of counting one-to-one

Making collections and sorting sets – how many do you have that are smooth, jaggy, round, noisy? Asking questions about how many…encouraging children to notice and count. Encourage children to think about how they can arrange their sets to make them easier to count e.g. items in rows or regular arrangements (dice, dominos, Numicon)

Role play always thinking about meaningful mathematical possibilities for counting e.g. in the bakery have 5 different options of cake displayed with numerals, 5 labelled chairs, purses and coins up to the value of £2, an order form which is a 5 frame to colour in

Counting ourselves: snack time, lunch time, lining up, as part of singing (children represent the 10 green bottles); using our fingers throughout the day to show amounts

Counting and clapping songs, games , rhymes, syllables every day

Digital Learning

Resources

Questions to Enable Higher Order Thinking

- How many magpies will we see on our walk today? Can you show me how many you think you will see on your fingers?
- Can you count the numbers on the dice?
- What number do you need to get to the cow?
- How can we make these stones easier to count?
- Can we line up in rows of 5 to brush our teeth?
- How many jaggy things are in the bag?

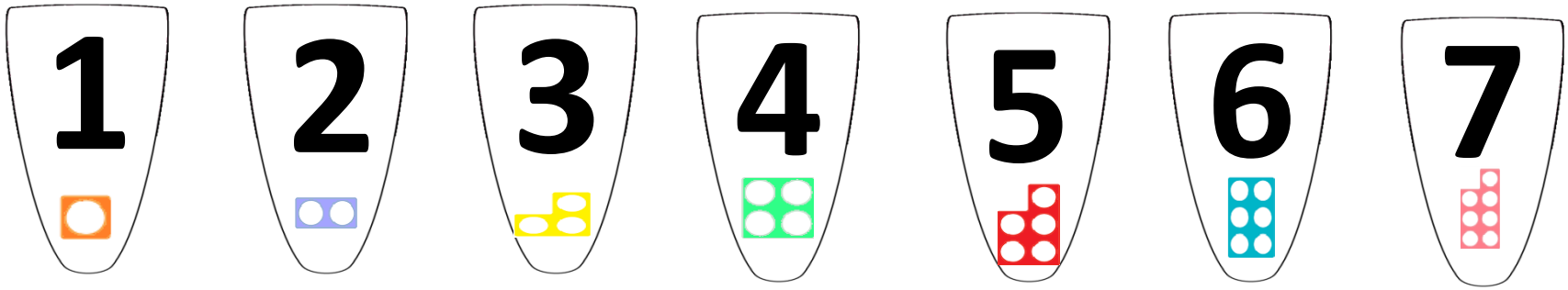
Potential Barriers / Misconceptions

- Children may not touch, point to or move each counter/item alongside saying the number name; this will require lots of modelling (one-to-one principle).

- Children may not realise that, when counting, the last number word is the answer to 'How many?' Some may think that the answer to 'How many?' is answered simply by pointing to each counter and counting from 1. It is important for the adult to model identifying the quantity of the collection is the last one counted, and that this stays the same regardless of where we start counting (cardinality and order irrelevance).

On Track at Transition Statement

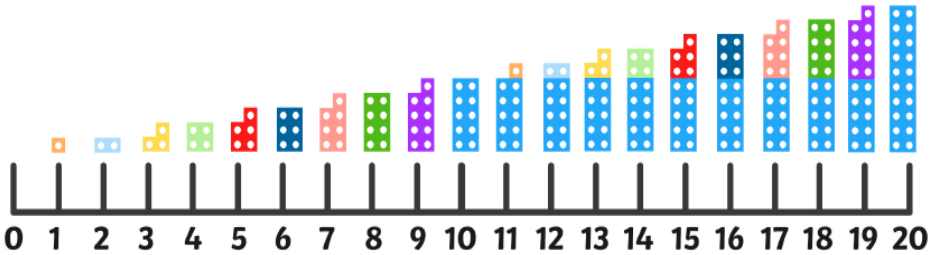
- Counts objects in a set recognising that the appearance of the objects has no effect on the overall total within 0-10 (conservation)
- Counts anything e.g. objects at a distance/in a book/sounds/claps within 0-10 (abstract principle)



Daily counting activities to include the use of number fans and/or number line.

Numicon Number Fans

Numicon Number Line



It can be difficult to explain to children the mathematical concept of 'five'. Using the Numicon shape for 'five' allows children to see that 'five' looks like 'one less' than six and 'one more' than four.

How many spaces in the green shape?

Can you count the blue shape?

Counting on/back

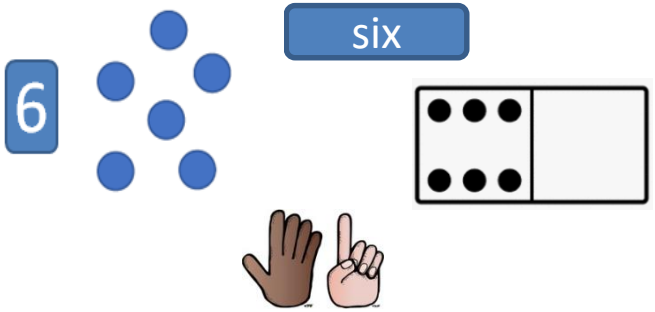
Counting on/back- use actions, puppets and objects to illustrate counting rhymes and songs

- How many claps, taps, barks, clicks…
- Counting on from various numbers
- Counting back from various numbers
- How many more to make 5, 10…?
- Can you clap five times and count aloud at the same time?




Regular and Irregular Patterns

Match to appropriate number/number name



Songs

- Ten Green Bottles
- One, two, three, four, five once I caught a fish alive
- One, Two, Buckle My Shoe
- One for Sorrow
- Five Little Speckled Frogs
- One Potato, Two Potato
- There were 10 in a bed
- 5 green speckled frogs
- 5 little ducks
- Johnny works with one hammer

Song planning sheet for intentional interaction

Observation of Counting Skills

When counting objects watch carefully as the child decides how many there are. Does he/she:

- Give an instantaneous response?
- Was it correct/incorrect? Why
- Can the child explain how they worked it out?
- Did they touch each object as they count?
- Move each object as they count?
- Track the objects with their eyes whilst counting in their head?
- Subitise (‘just knows’)?

Resources – Counting

Common Learning Resources

Loose Parts

Dominoes

Fingers

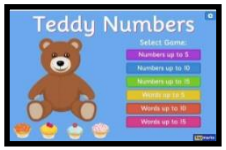
Dice Games

Block Play

Sets of objects

Puddle Play

Online Resources



Number Talks
Age 3 to 5

Recognising, creating and describing patterns with numbers

Stories

- *Elmer's First Counting Book* by David McKee
- *One Chicky, Two Chicky:* A Counting Book by Cheryl Casey
- *Mama Cat Has Three Kittens* by Denise Fleming
- *Counting Cows* by Michelle Medlock Adams
- *Chicka Chicka 1, 2, 3* by Bill Martin Jr.
- *Ten Red Apples* by Pat Hutchins
- *Over in the Meadow* by Jill McDonald
- *Butterfly Colors and Counting* by Jerry Pallotta
- *On The Launch Pad* By Michael Dahl
- *One is a Snail, Ten is a Crab* by April Pulley Sayre
- *One Gorilla* by Anthony Browne
- *10 Little Rubber Ducks* by Eric Carle
- *How Many Legs* By Kes Gray
- *Centipedes 100 Shoes* by Tony Ross
- *1, 2, 3 Little Donkey* Rindert Kromhout
- *Feast for 10* by Cathryn Falwell

Notice and Name!

- Using the tracker, can you observe and identify significant learning in these pictures?

Linthaugh Nursery

Meiklewood Nursery

Lyoncross Nursery

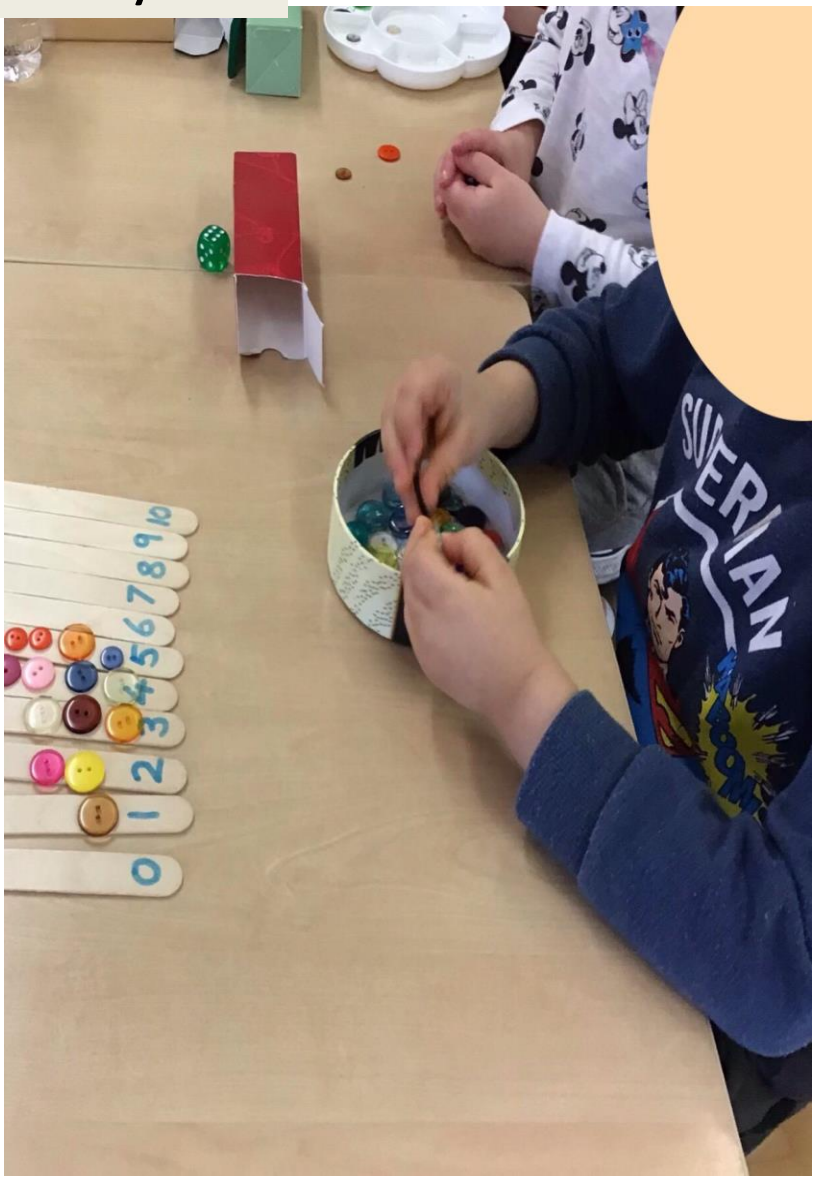
Meiklewood Nursery

Glasgow City Mission Children and Family Centre

Meiklewood Nursery

Meiklewood Nursery

Linthaugh Nursery



High Quality Provision

Meiklewood Nursery

Lyoncross Nursery

Counting and Subitising RtA

Numeracy and mathematical thinking encompasses many different elements including recognition of numerical symbols, verbalising numbers and being able to recognise patterns and shapes.

It involves many different skills such as understanding numbers, counting, problem solving, measuring, sorting and patterning. However, numeracy is not only about developing these skills.

p75

It is also about having the ability to apply these concepts in all areas of life. Therefore, numeracy should be embedded throughout the curriculum and the environment and should not simply be seen as an area on its own.

'*The same part of the brain is used to subitise small quantities as to process symbolic number and so it is an important aspect of number development*'

Cantlon et al. 200

Contacts

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- **Twitter**: @GlasgowLEL
- **Blog**: Google Leaders of Early Learning https://blogs.glowscotland.org.uk/gc/gccleadersofearlylearning/

Glasgow Counts in our Playrooms

THE SCOTTISH ATTAINMENT CHALLENGE
LITERACY NUMERACY
HEALTH & WELLBEING

Glasgow's Improvement Challenge
Unlocking Learning

Professional Learning gtc SCOTLAND 2018 EXCELLENCE AWARD