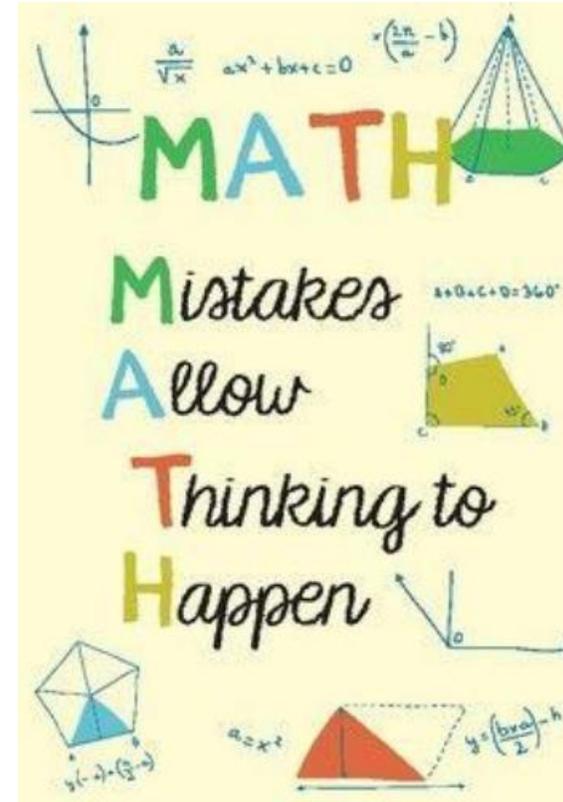


Maths Workshop



What are your memories of maths at school?

How do you feel about maths?



Where are we aiming?



Mathematics
Number
<ul style="list-style-type: none">• 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.
Numerical Patterns
<ul style="list-style-type: none">• 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.

Deep understanding

What is counting?



We often want to rush to using symbols in maths and counting is no different.

Our aim is to help children to develop a firm grasp of counting before we formally introduce the symbol of a number.

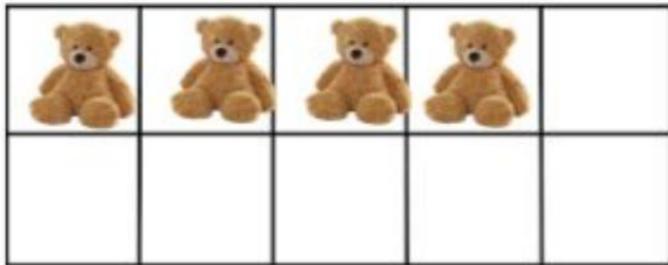
Counting:



5 Counting Principles

1. One-one Correspondence principle

Understanding that each object counted must be given one count and only one count.



Counting:



2. Stable order principle

Understanding that counting sequence stays consistent. It is always 1, 2, 3, 4, 5, 6, 7 etc

Not 1, 2, 4, 5, 7

Can your child spot your mistake?

Nursery rhymes,
practise counting in a
variety of different
things in different
ways.

Counting:



3. Cardinal principles

Understanding the last count of a group of objects represents how many are in the group.

Keep modelling: There are 1, 2, 3 marbles in the jar. There are 3 marbles.

Counting:



4. Abstraction principle

Understanding that it doesn't matter what you count, how we count stays the same.

For example any sets of objects can be counted as a set, regardless of whether they are the same colour, shape, size, etc.

This can also include non-physical things such as sounds, imaginary objects, etc.

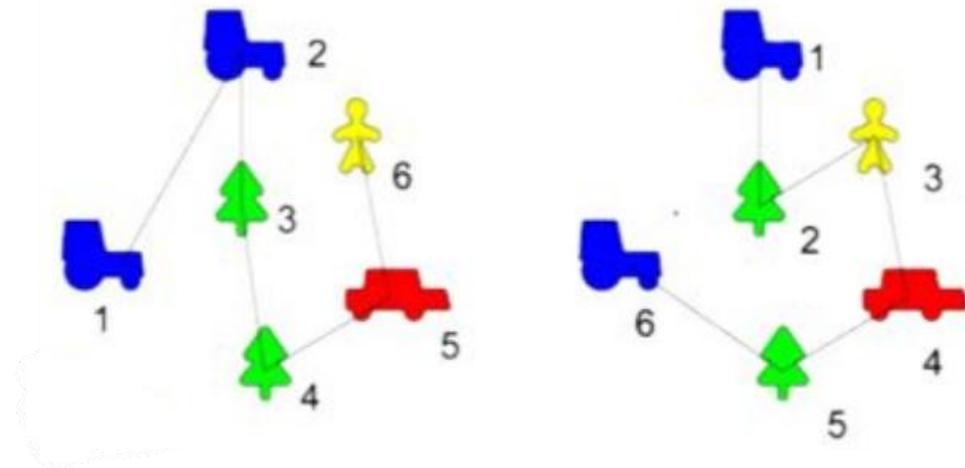
Counting:



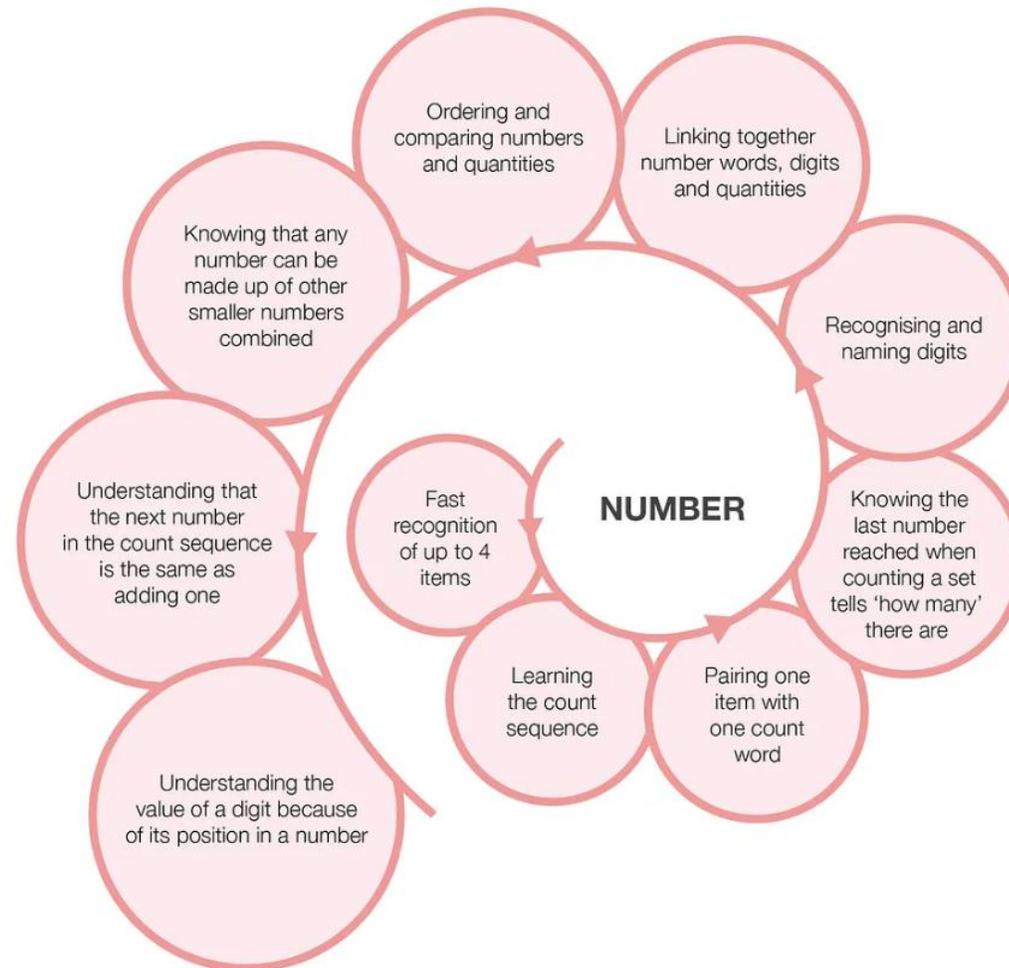
5. Order irrelevance

Knowledge that the order that items are counted in is irrelevant as long as every object in the set is given one count and only one count.

Re-count real objects that can be touched starting from different positions.



Understanding of number:

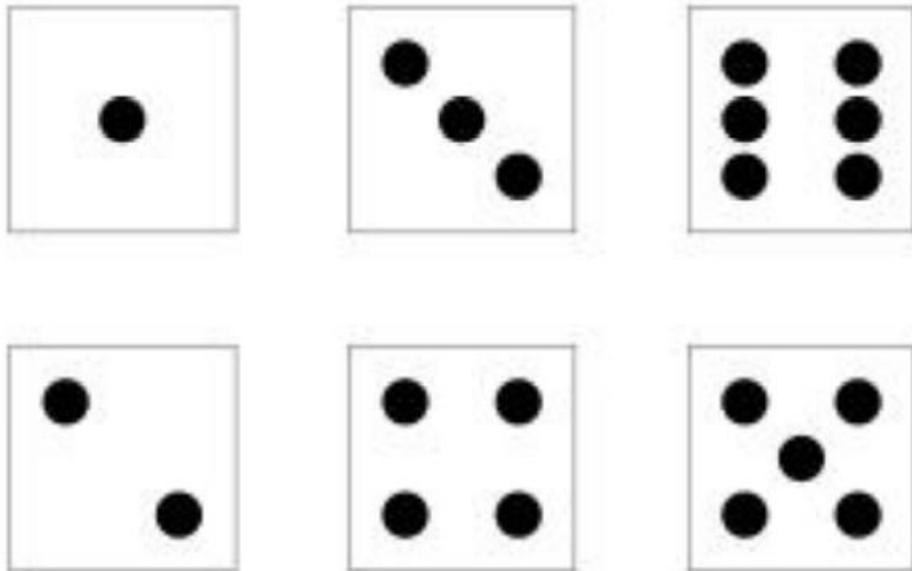


Subitising:



It is the ability to quickly recognise how many objects are in a group without actually counting.

Reinforces principles of counting and beyond.

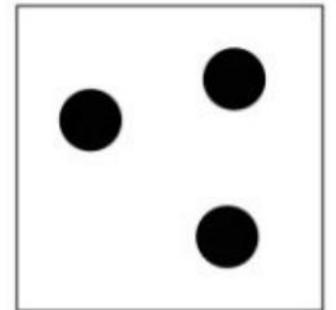
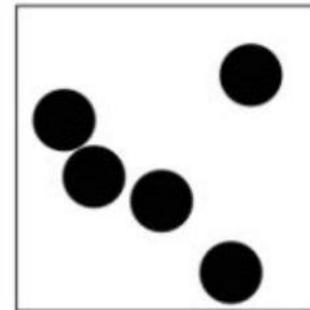
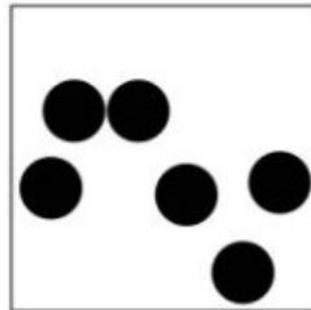
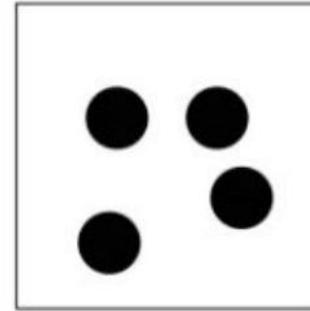
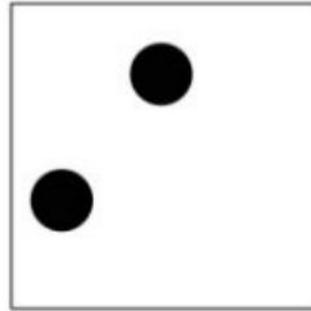


What numbers are represented here?

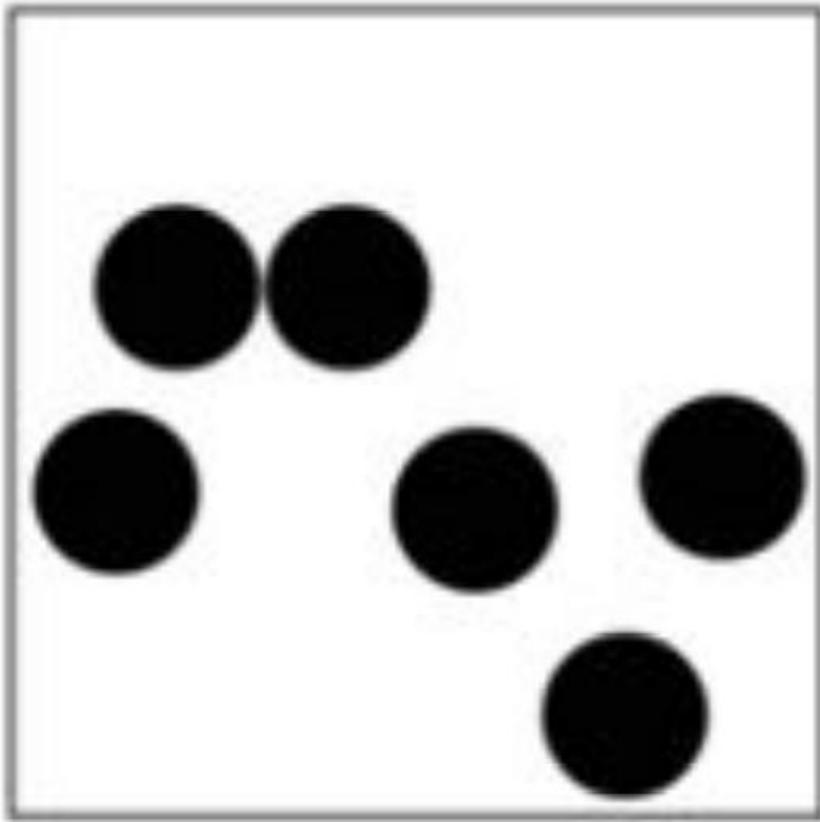
Subitising:



What numbers are represented here?

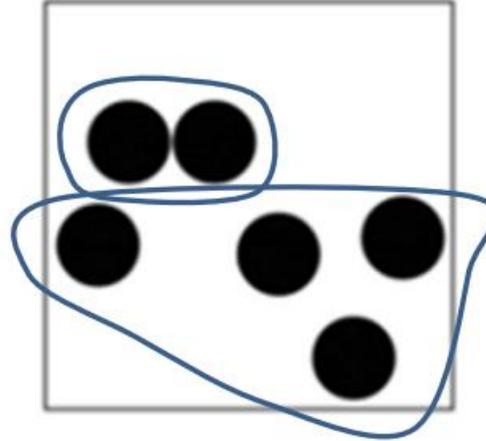
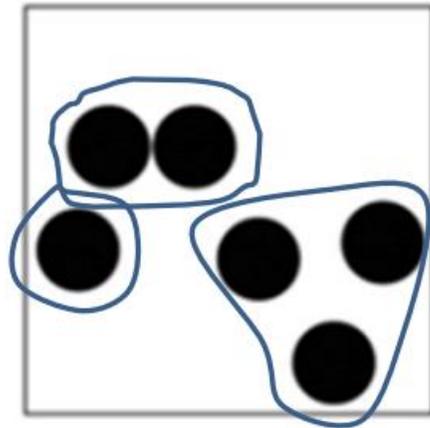
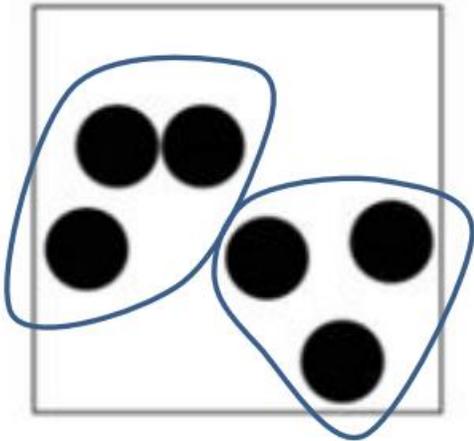


How did you see the number?



What numbers can you see hidden?

Number patterns:

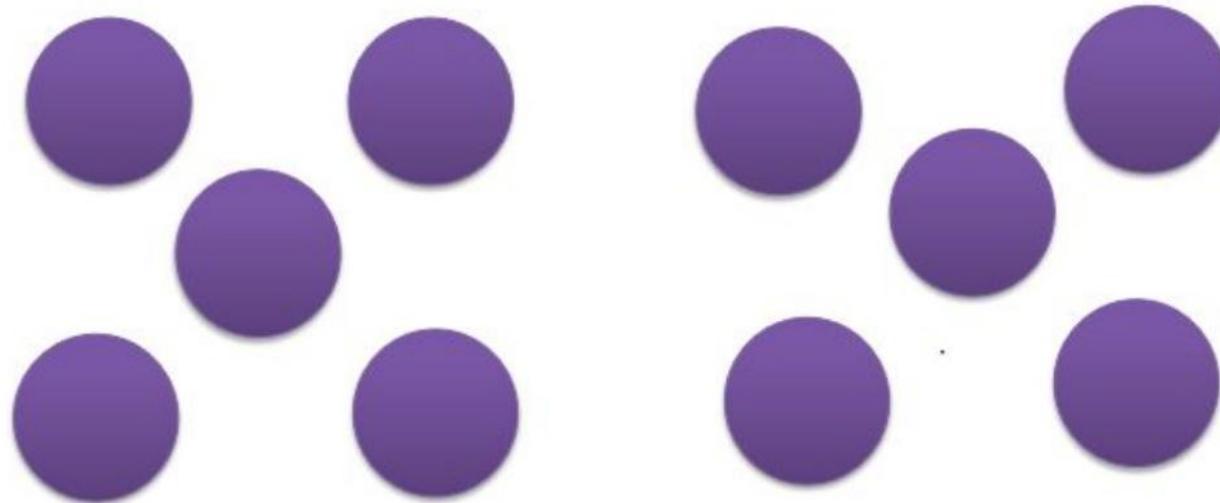


I know 1 and 3
makes 4.

2 more than 4 is
6.

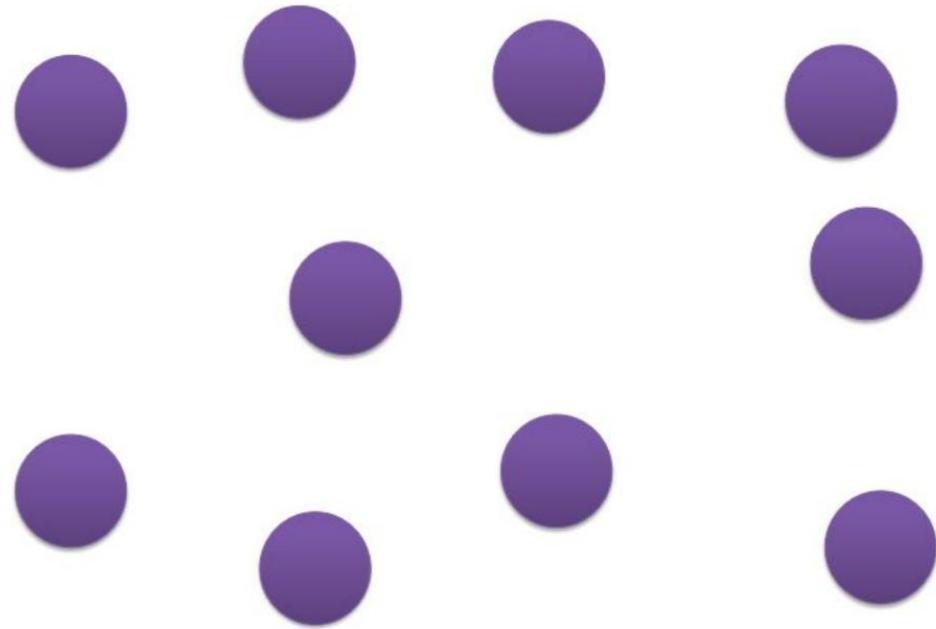
There are more ways to recognise 6. By asking the children to investigate images and talk about what they can see helps children develop their understanding of different numbers.

Number patterns:



What numbers
can you see
hidden?

Number patterns:



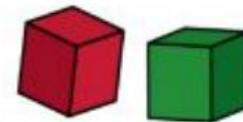
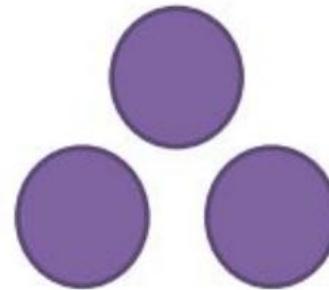
What numbers can you see hidden?

Also developing positional language: next to, underneath, above, at the side.

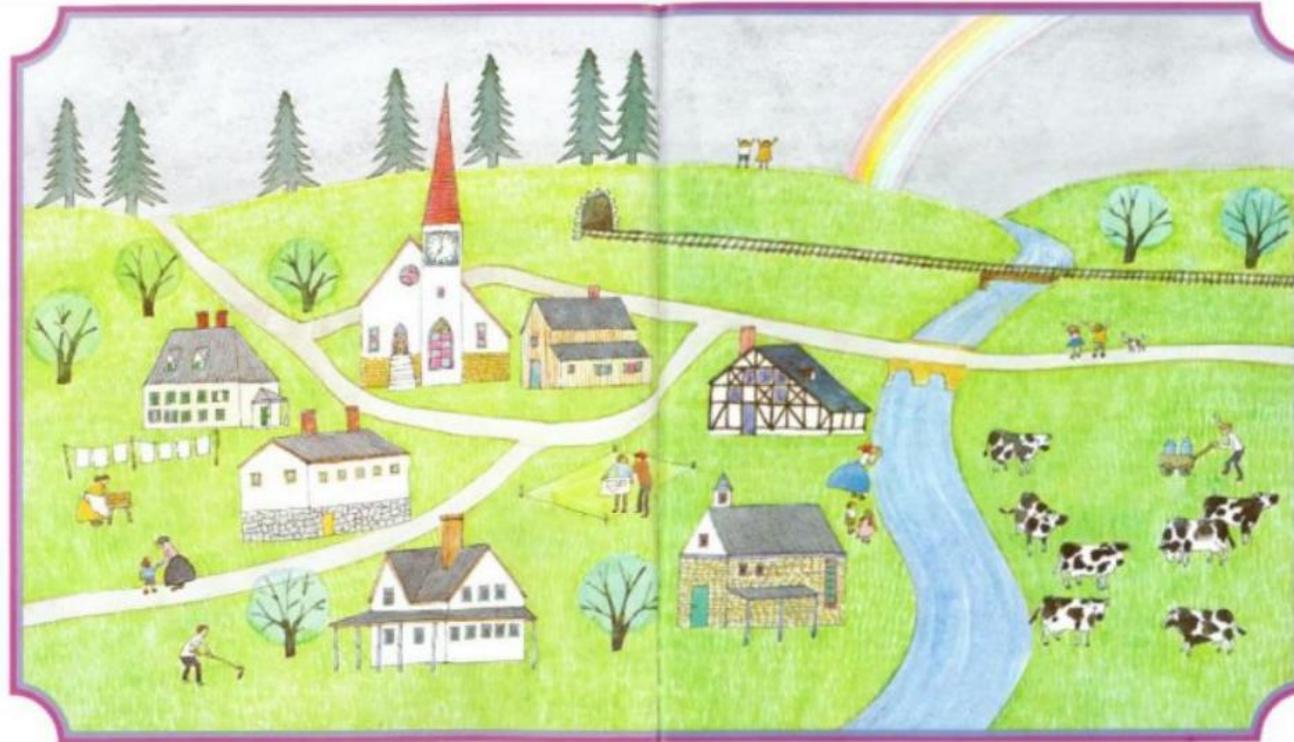
Number patterns:



Not just dots....



Subitising in the environment:



How many times can you see 7 objects?

Subitising in class/home?



Number pairs

Quick flashcards

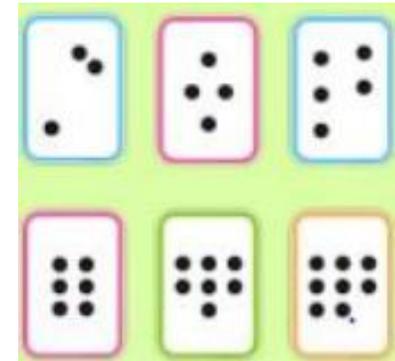
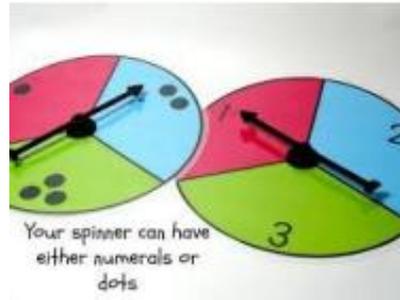
Bingo

Number treasure hunt

Find a number the same as mine, more than, less than mine

Dice game and spinners

Domino games



What does subitising help with?



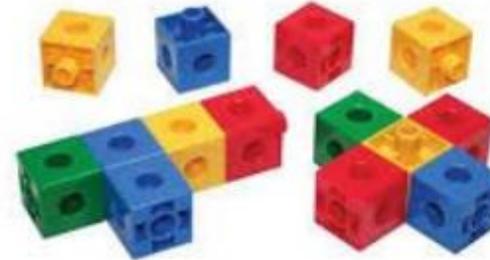
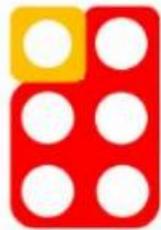
Numbers are composed of smaller numbers

- Numbers can be made of 2 parts
- Numbers can be made of more than 2 parts
- Numbers can be made of equal parts
- Numbers can be made of unequal parts

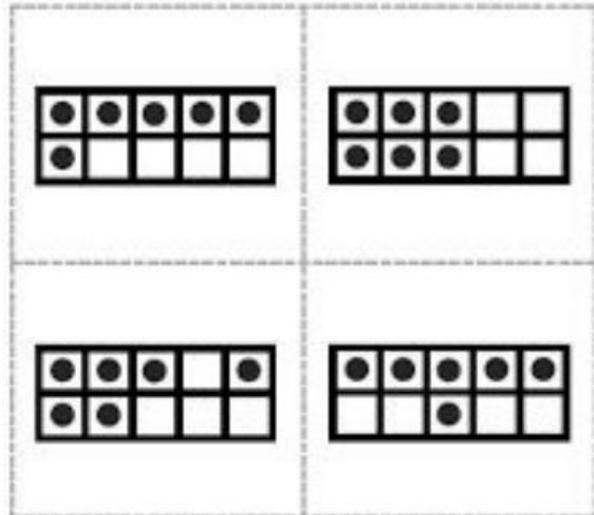
Resources:



6 is 5 and 1

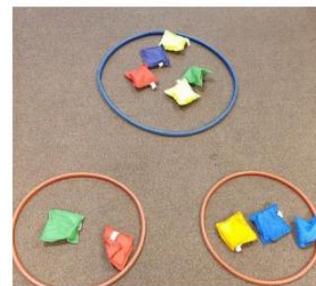
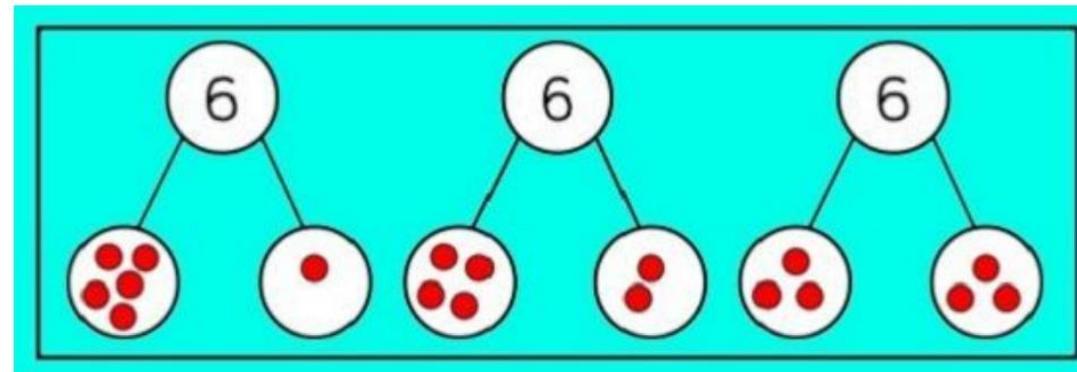
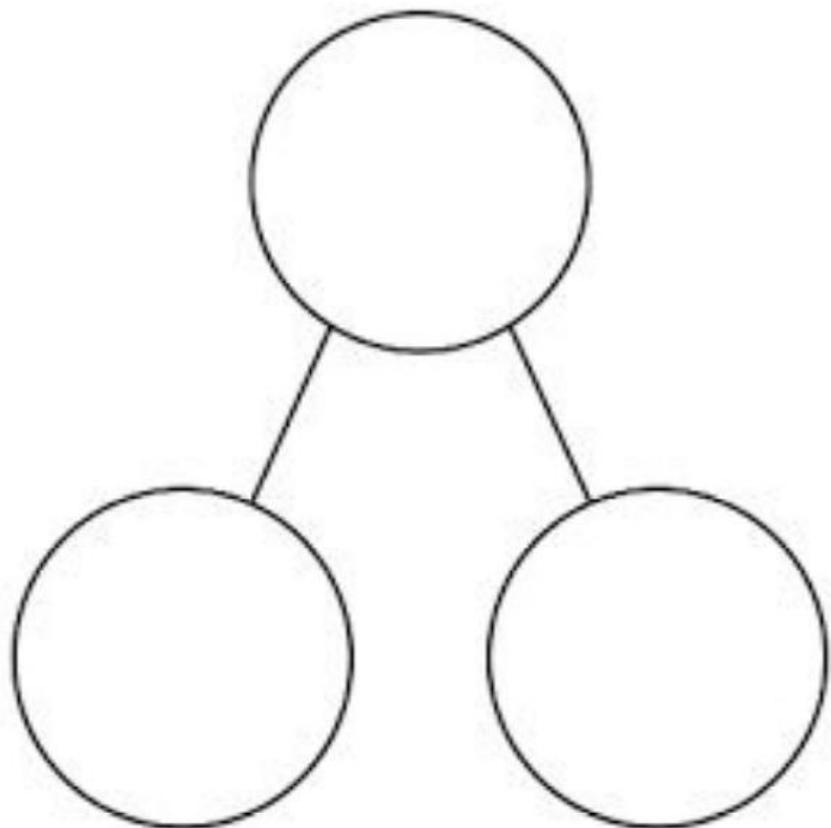


What can you build with cubes?

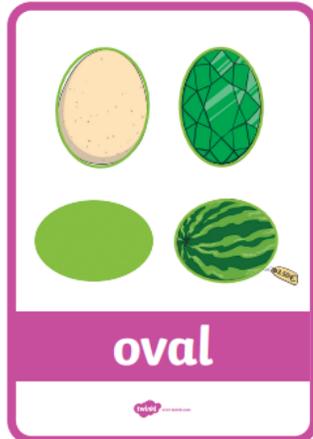
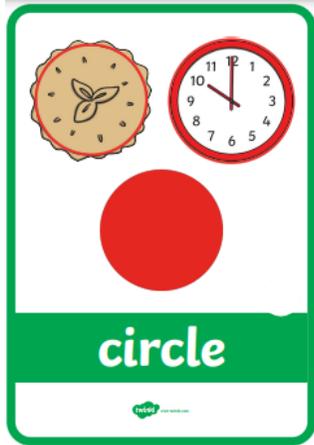


How can you place 6 counters onto the 10s frame? What hidden numbers can you see?

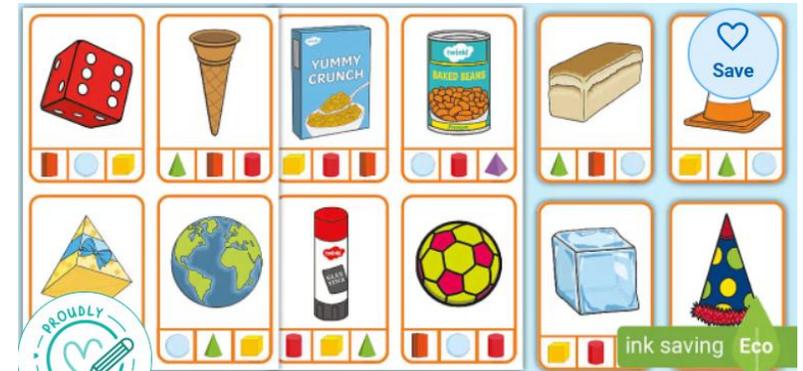
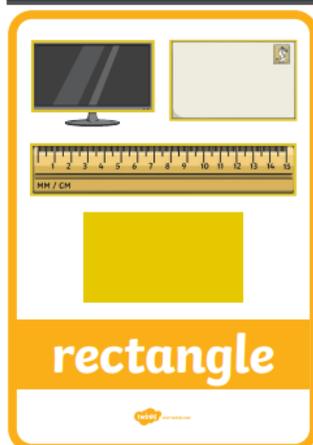
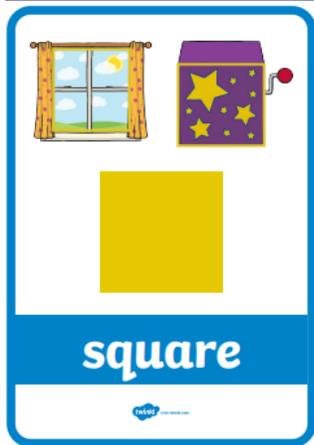
Part whole model:



Shapes:



Naming 2D and 3D shapes in environment.
2D shapes are flat
3D shapes are FAT!



Maths in the environment:



- Numbers/shapes/colours in the environment.....I spy a shape and it has three corners...what is it?
- Quantities for cooking- Is there enough? Can you fill the cup so it is full/half full? Is there more sugar/flour?
- Fitting flat pack together- Is that piece long enough? Do you think we need the shorter piece?
- Sorting washing- matching socks
- Laying the table- I need four knives..... I have three spoons how many more do I need to make 4four?
- Money- let them use it!
- Position- Can you put your shoes on top of the step....

Top tips:



- When subtracting, take items away/cross them off/ cover them over so that they can physically see the change. Vice versa with addition.
- Use of language- add it in...just like reading-be ambitious! Say it in different ways e.g subtract/take away/minus
- Number formation- Rhymes we do
- Bathtime/walking to school- What comes next..."2,3,4..." Show me "3!" Can you make it a different way?

A skill for the future:



$$5 + 6 = 5 + 5 + 1 = 11$$

$$40 + 30 = 3 \text{ tens} + 4 \text{ tens} = 7 \text{ tens} = 70$$

$$3 + 3 = 6. \text{ Half of } 6 \text{ is } 3$$

$$8 \div 2 = 4 \quad 8 \text{ sweets divided into groups of } 2 \text{ is } 4$$