Maths Early Learning Goal

Number

Early Learning Goal - 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.

Maths ELG

Numerical Patterns

Early Learning Goal - 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.

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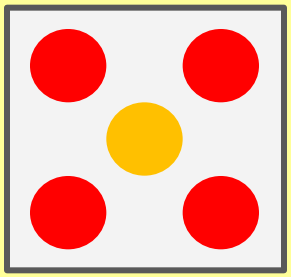
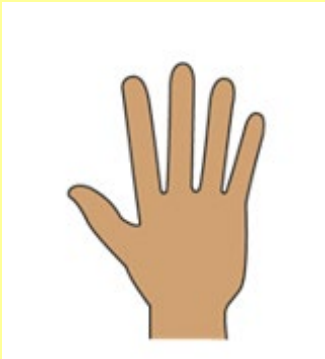
Mastering Number

Reception



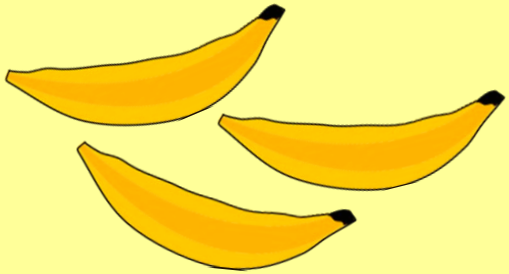


How does Mastering Number help us to teach maths in school?

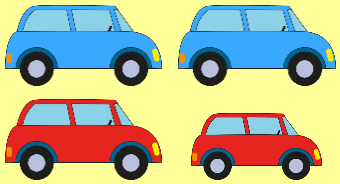
The Mastering Number Programme in Reception will help your child to develop *good number sense*.

Some of the things they are learning include:

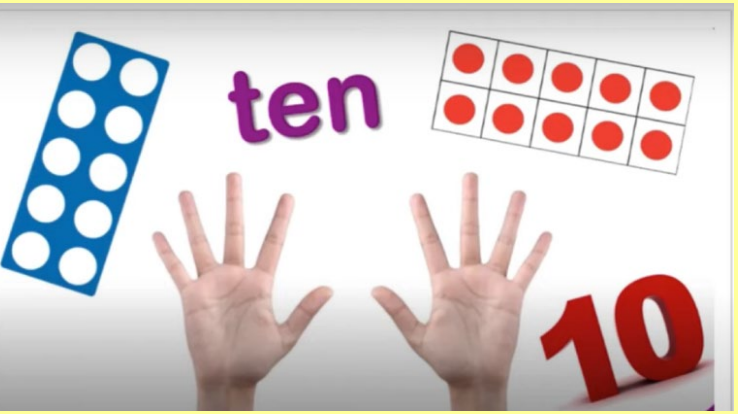
Counting



Recognising small numbers of objects and making their own collections



Know different ways to 'make' (compose) a number



The Gattons Infant School
Everybody Matters


1 2 3 4 5
6 7 8 9 10


L M N O P


Ellemennopee

Letterland

- The new number names are a,b,c, d

- Count from L to T
- Back from G
- Count back from P

- E+E J-E B+E

Language

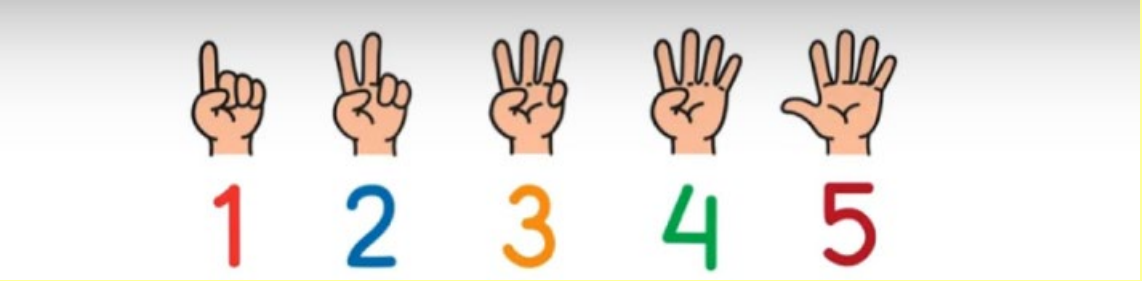
- Largest and Smallest Number

2 24 9

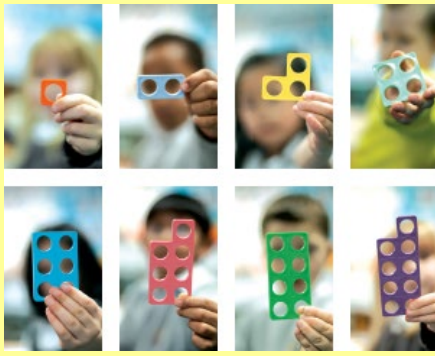
Where are the other 5 buses?

I am a size 3 shoe but I have two feet!


Counting principles

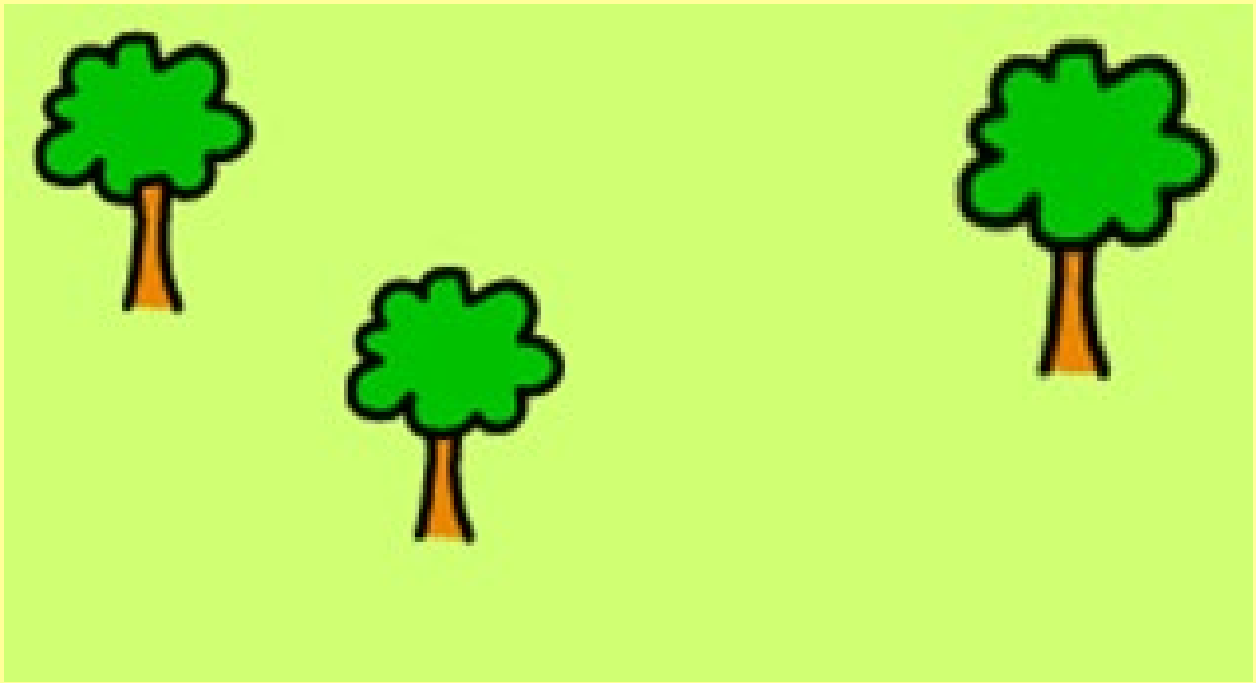


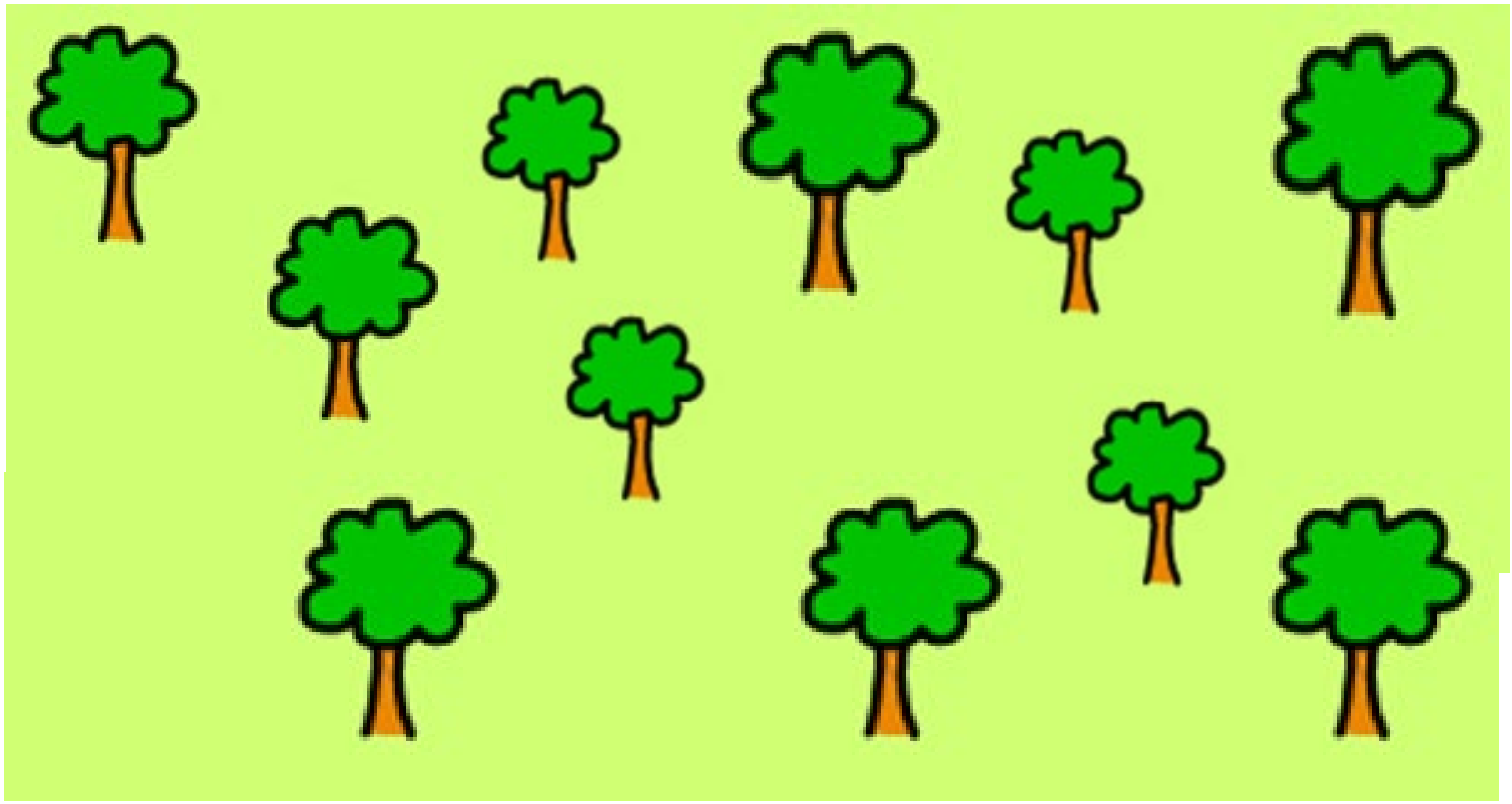
- One to one principle
- Stable order principle – order remains
- Cardinal principle – name the count
- Abstraction principle – jumps hops
- Order irrelevance
- Conservation space does not impact the count (does not matter if objects are spaced out)



Let's do some maths

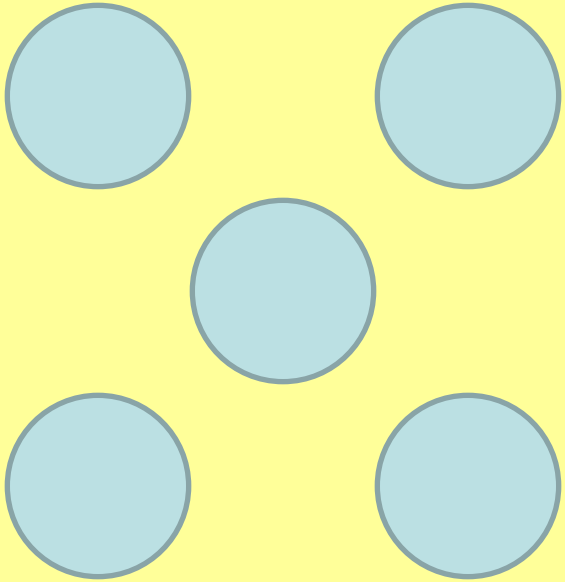
Look out for when you can use your subitising skills! Get those fast eyes ready!





NCETM

NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

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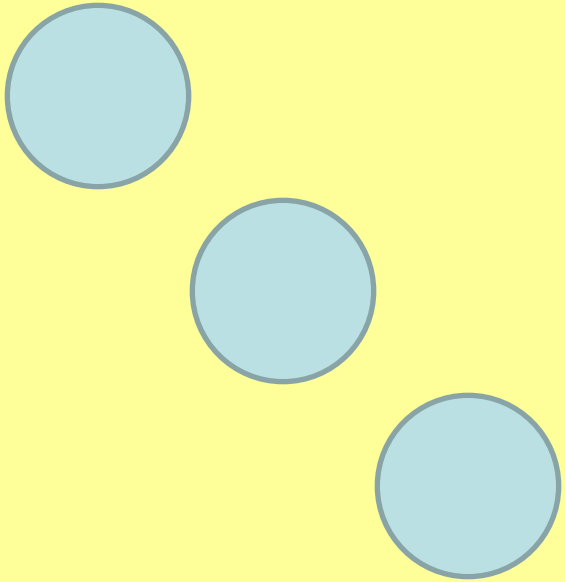


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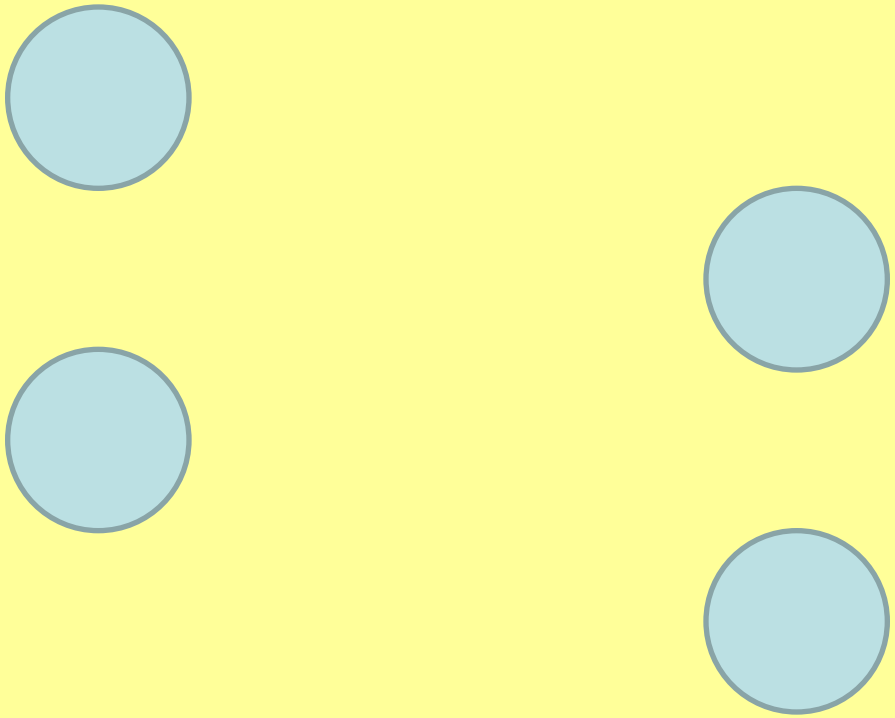


NCETM
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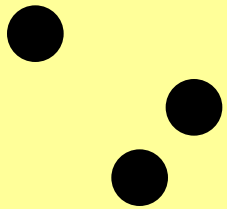
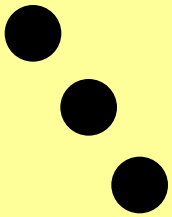
IN THE TEACHING OF MATHEMATICS

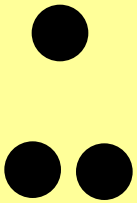
Subitising

Subitising is the ability to recognise a *small quantity* of objects *without the need to count*.

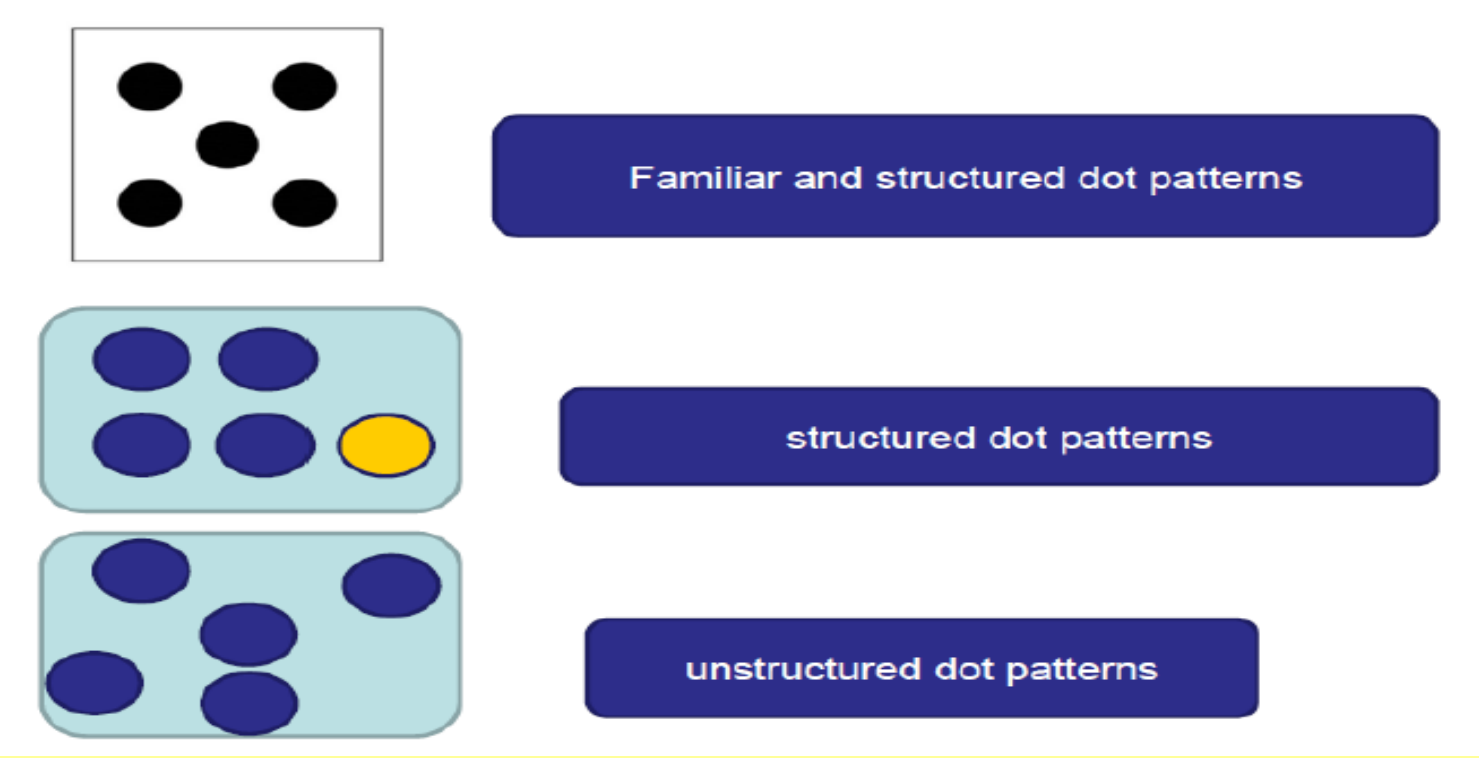
Sometimes when we subitise we can see two groups at once; if we know that 3 can be ‘made’ of 2 and 1, then we know how many there are altogether without counting.







Perceptual Subitising



CONCEPTUAL 1 0 – 5

Two cards or distinct separation.
Various combos and patterns up to 5.

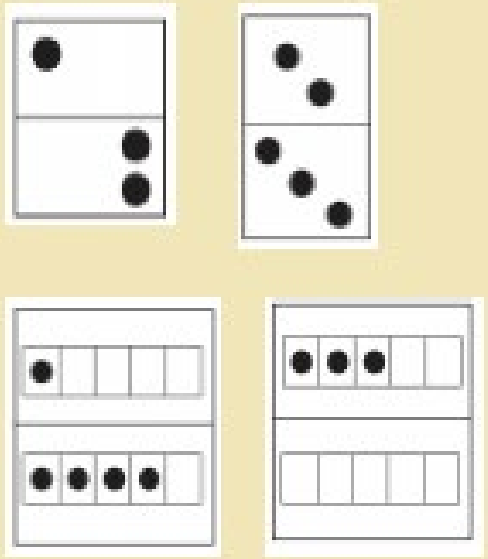
Key messages

How did you see that?
3! I saw a 1 and a 2 and together that makes 3

Did you count?
No!

What did you combine and what did you get altogether?
I combined 1 and 2 and together that makes 3.

EXAMPLE VISUAL REPRESENTATION



Show me Grow me Throw me

Play Bunny Ears

How will knowing how numbers are 'made' help?

If children know that **4 can be made of 3 and 1**, they can apply this knowledge later on to see that:

30 and 10 is 40
300 and 100 is 400
and that;
400 take away 100 is 300

Our maths focus is:

represent a given number on their fingers without looking
compare 2 sets of objects and say which is 'more than'

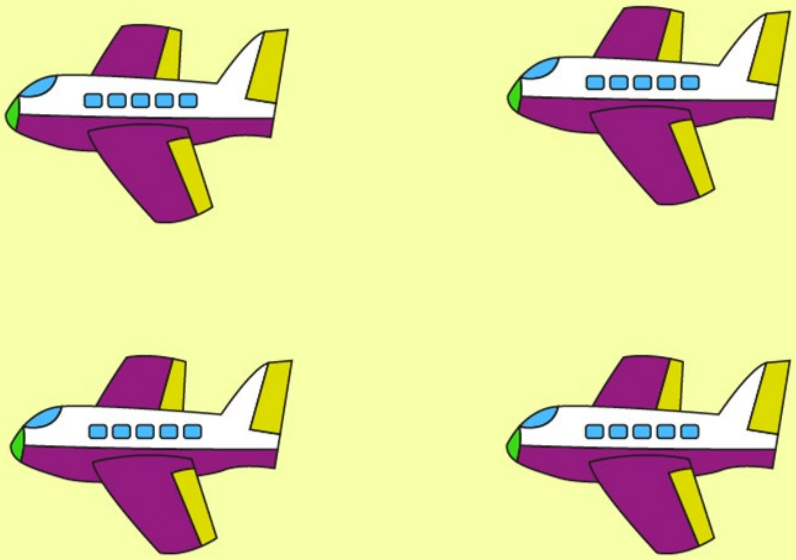
Stem Sentence

_____ has more than _____ .

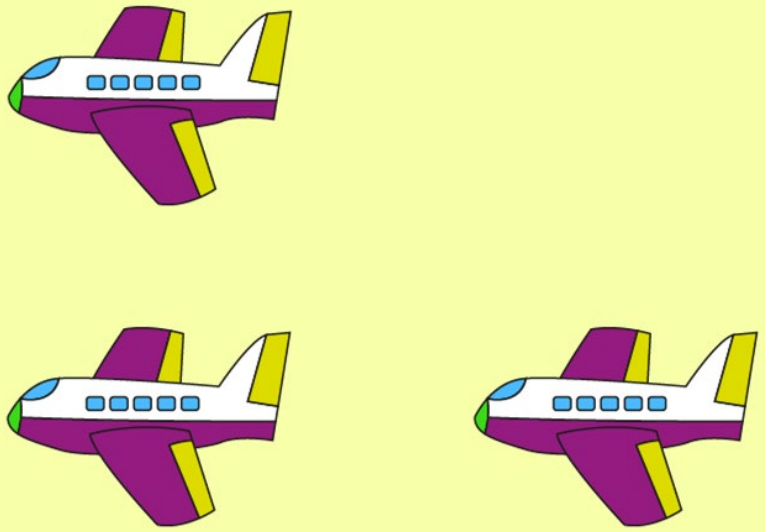
Generalisation

There are five fingers on my hand

Pat

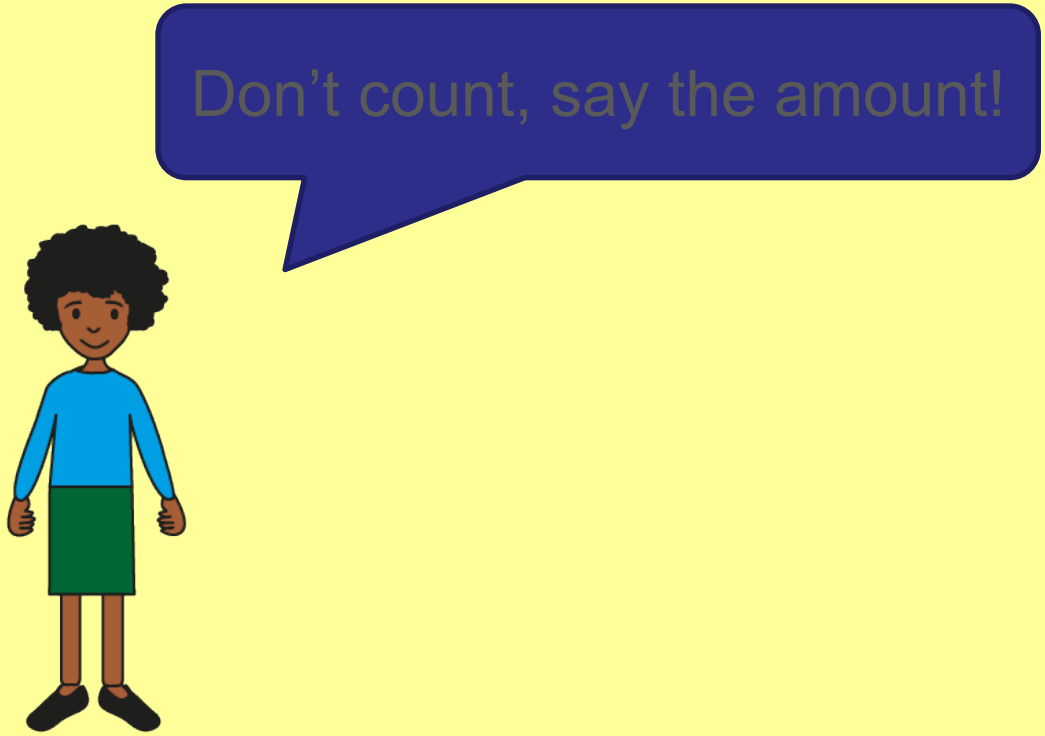


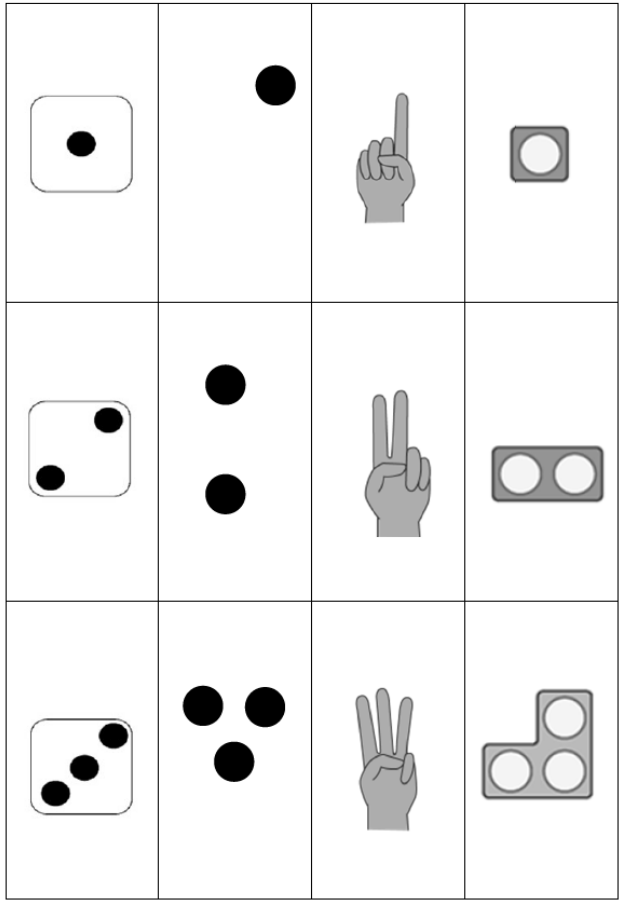
Sam



_____ has more than _____ .

Play ‘Subitising to 3 snap’





Grown-ups:

Please cut these into 12 separate cards and hand them to your child.

Children:

Please spread the cards out and place them ***face-down*** in front of you. (Ask the grown-up for help if unsure).

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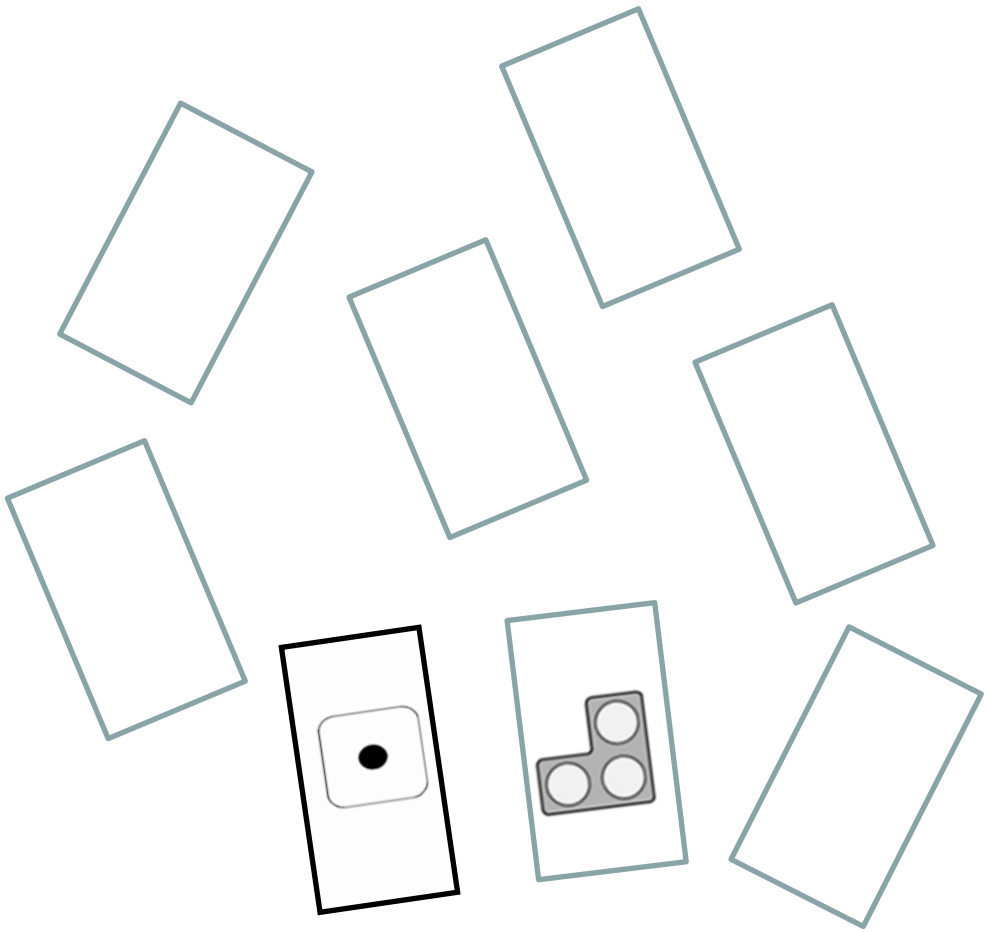
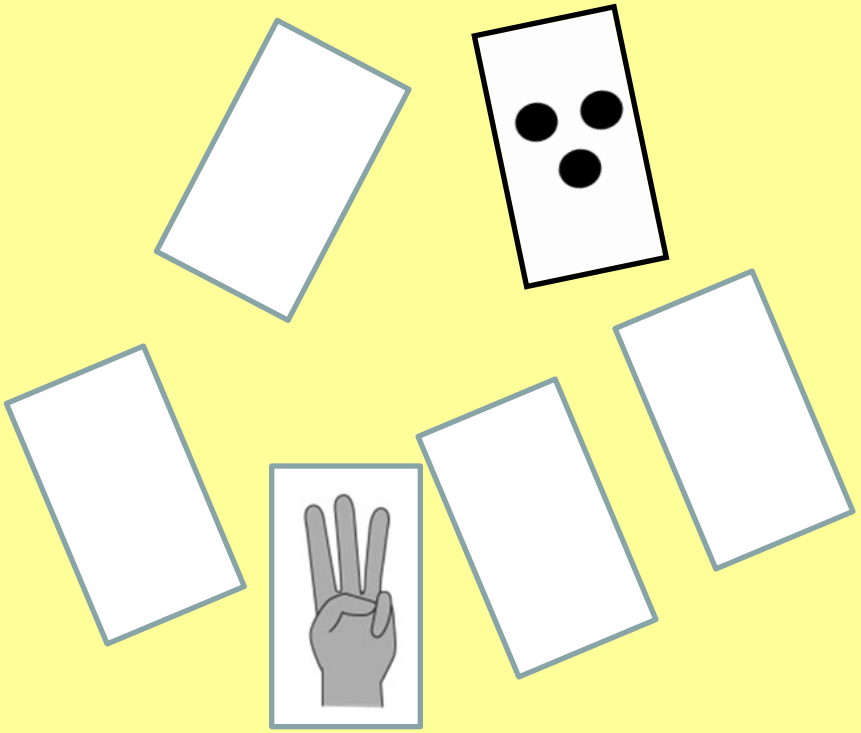


Take turns to turn two cards over and say the number you can see.

If the numbers do not match, place them back and try to remember where they are in case you need them later.

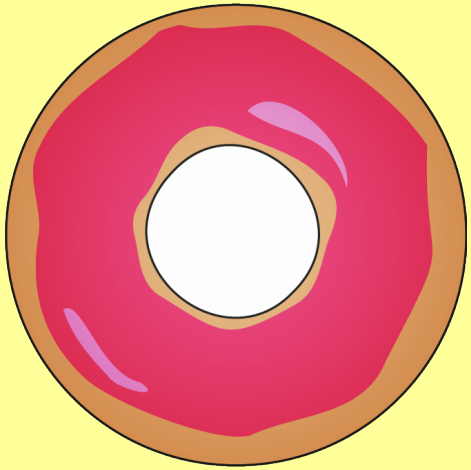


When it is your turn, if you turn over two cards that are the same, you can keep them.

The winner is the person with the most cards when they are all used up.

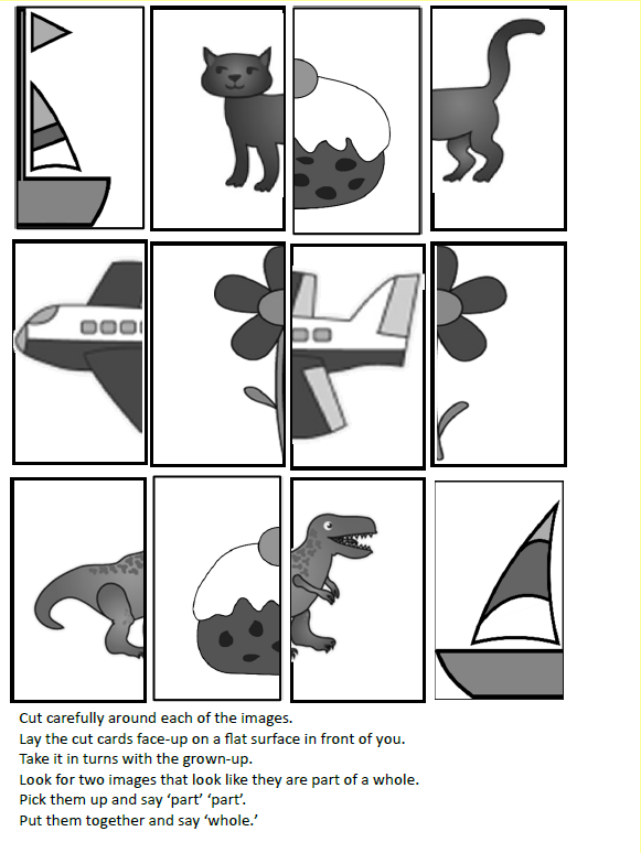
Play ‘Part-part-whole’

The ‘hole’ in the donut?



A ‘whole’ donut?

Find 2 **parts** that make a **whole**.

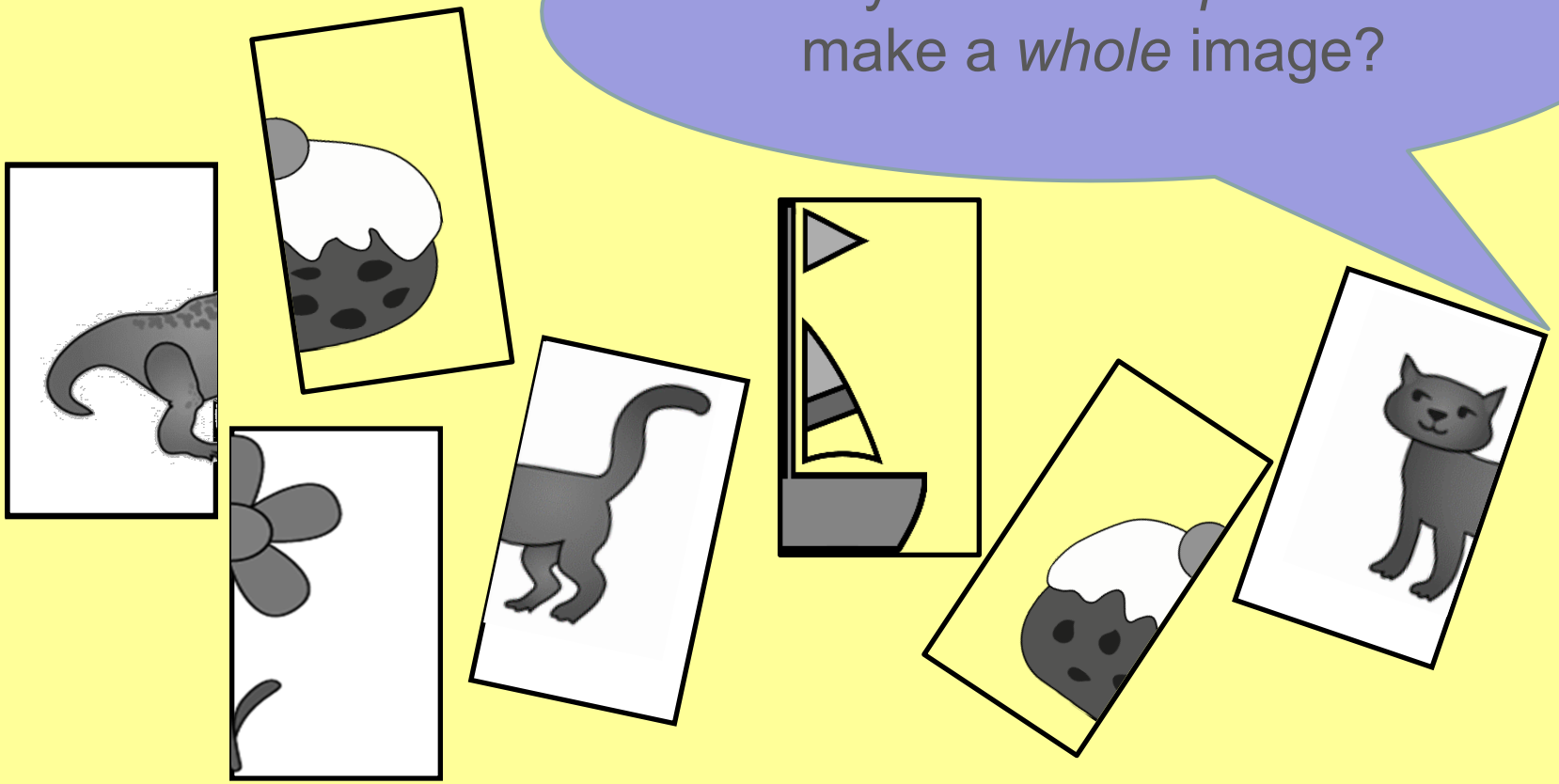


Cut carefully around each of the images.
Lay the cut cards face-up on a flat surface in front of you.
Take it in turns with the grown-up.
Look for two images that look like they are part of a whole.
Pick them up and say 'part' 'part'.
Put them together and say 'whole.'

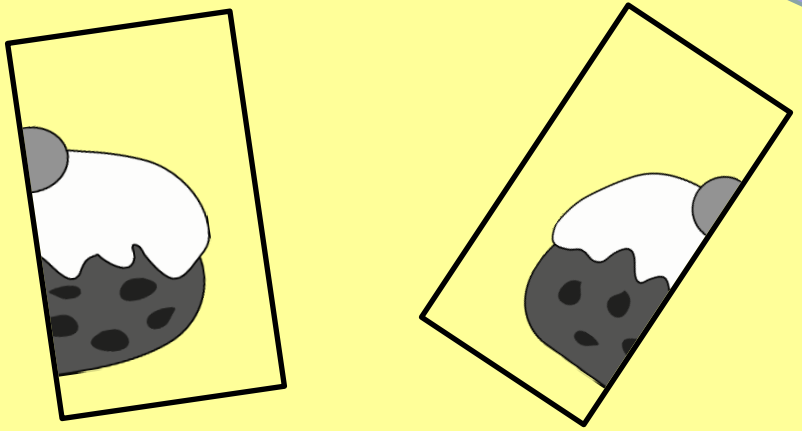
Grown-ups will need to carefully cut out these cards.

Children: place the cards ***face-up*** so you can see the pictures and spread the cards out in front of you.

Can you see two *parts* that make a *whole* image?

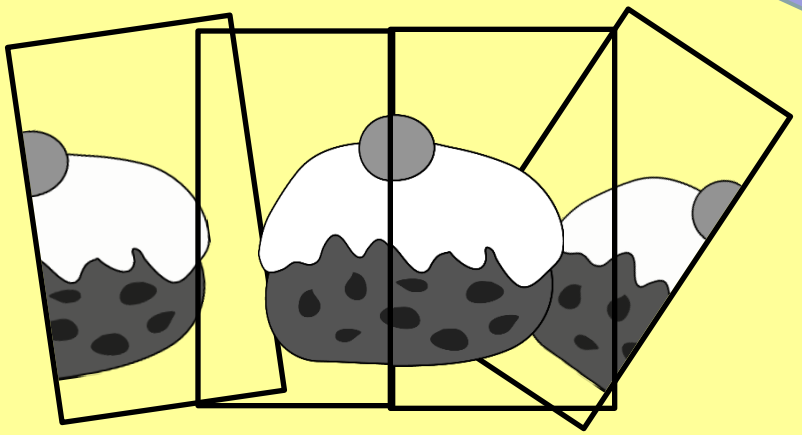


Pick up each piece and say: ‘part… part…’

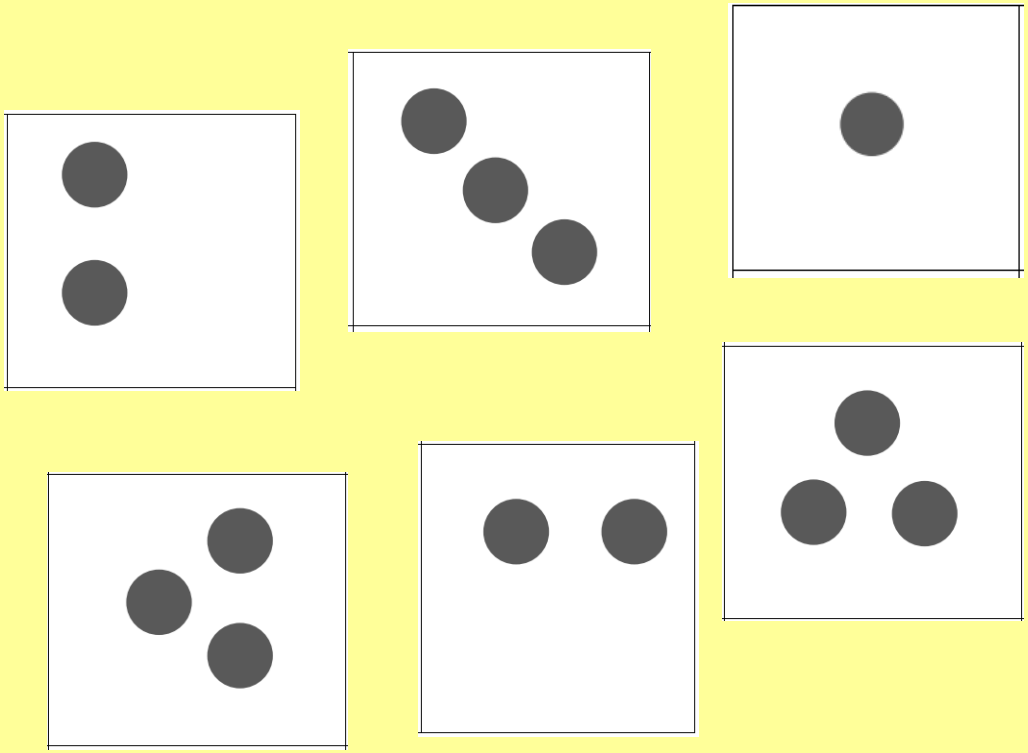


Now put them together and say: ‘whole!’

Can you find all the ‘wholes’ by doing the same?

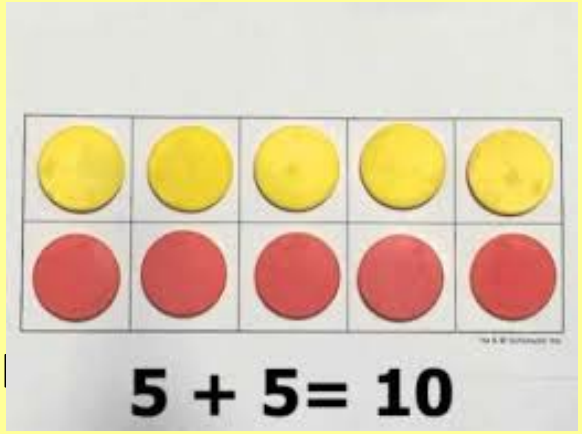


Part-part-whole with dots



One person will pick up a card, and the other person must pick up the card that will ‘make 4’.

Why use a Five/ Tens Frame?



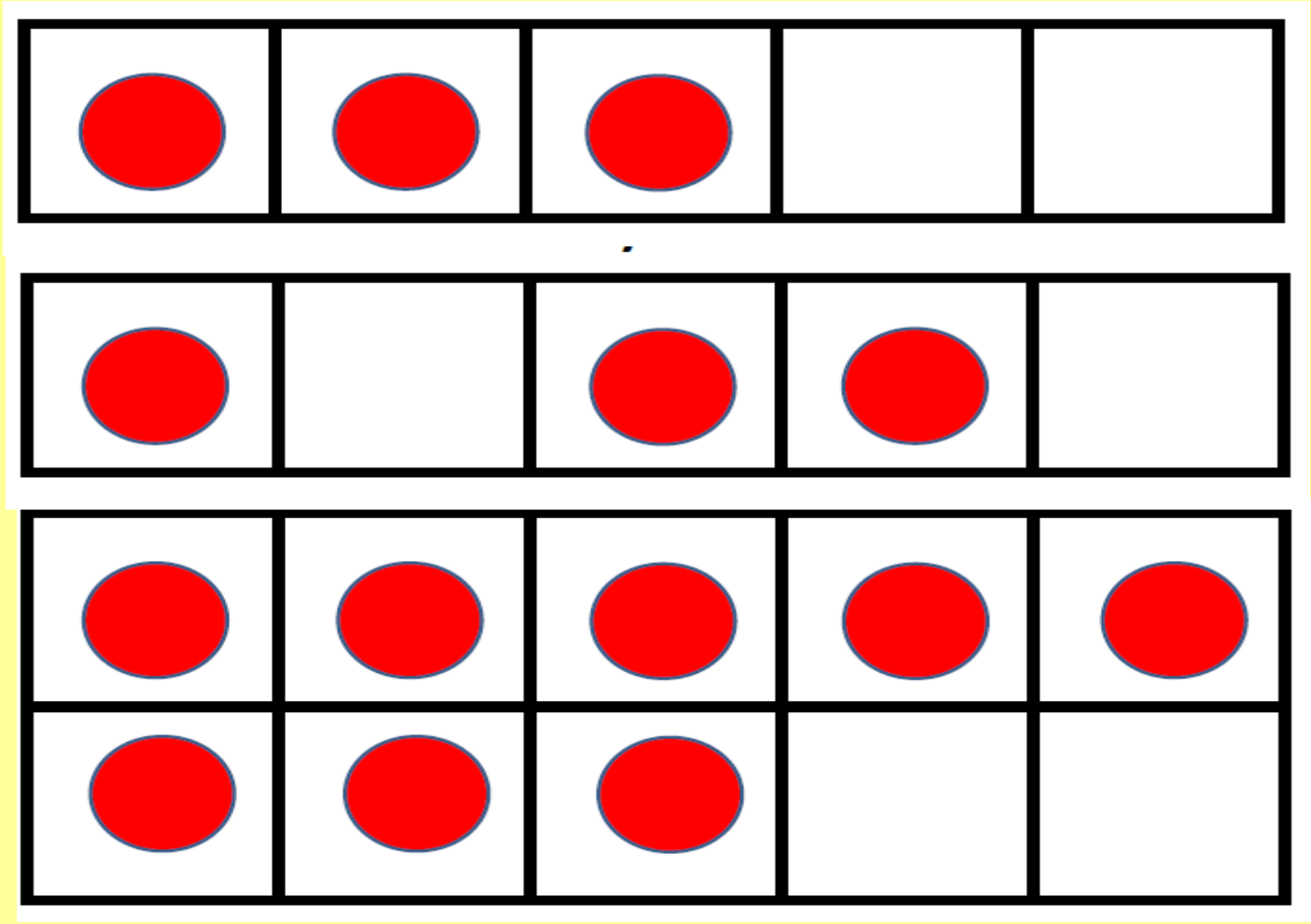
- Moveable so children can see

Numbers in a range of ways.

- Making numbers and number relatio
- Making connections; using and applying

Reception

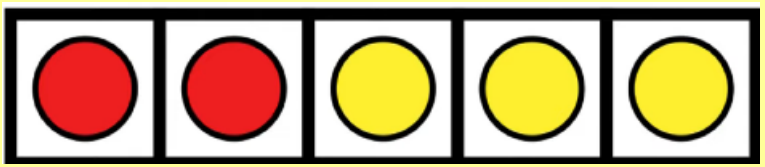
- Five Frame to develop number sense to 5
- Seeing the numbers in different combinations with an element of speed
- Seeing for a few seconds children begin to find new strategies rather than counting eg grouping them



How many are there?

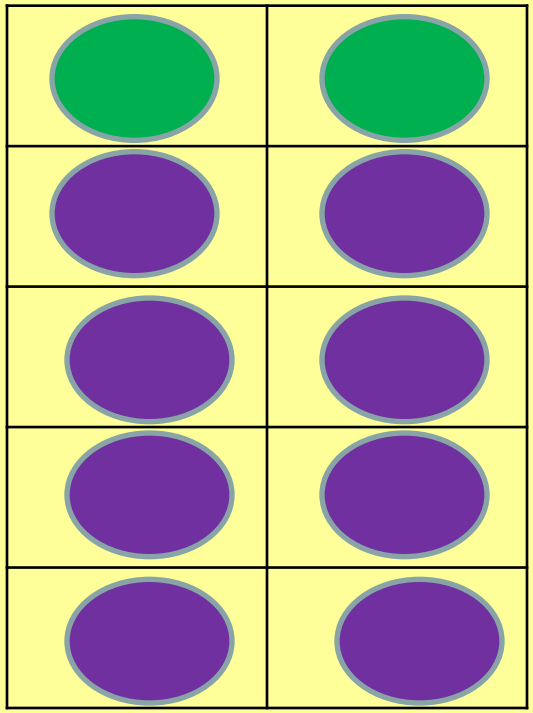
How do you know?

Can you explain how you know?




10
2

8+6 = 14



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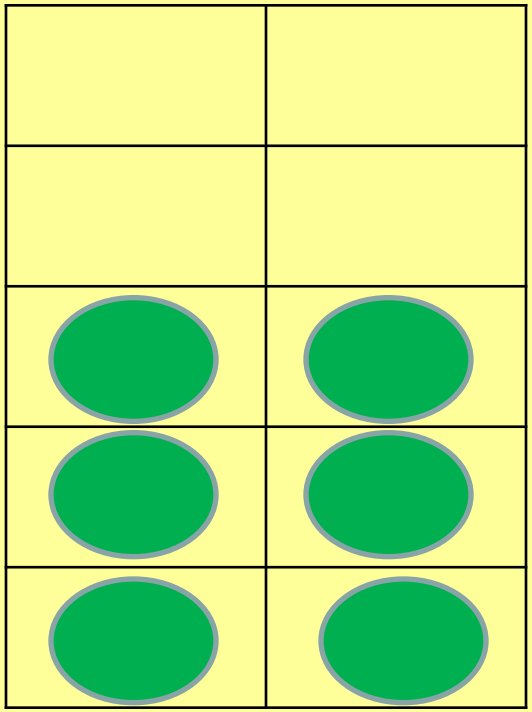
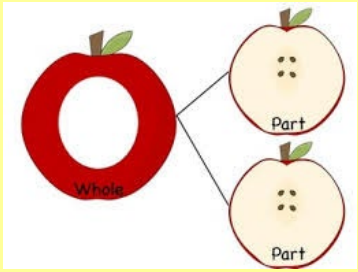


Tens frame activities to try

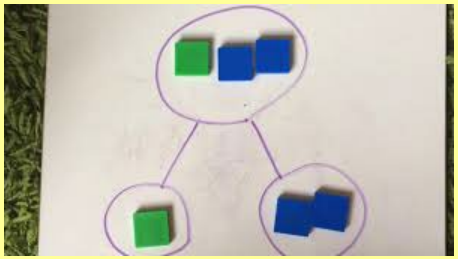
- Using two different coloured counters how many ways can you make ten?
- Can you think of the related subtraction number sentences?
- Can you fill part of your tens frame and ask a partner to work out the missing number?
- Pick a number.–How many ways can you represent it on your tens frame?
- With a friend fill up your tens frame in secret. Can your friend guess how it is filled by asking questions e.g. is more than half red?

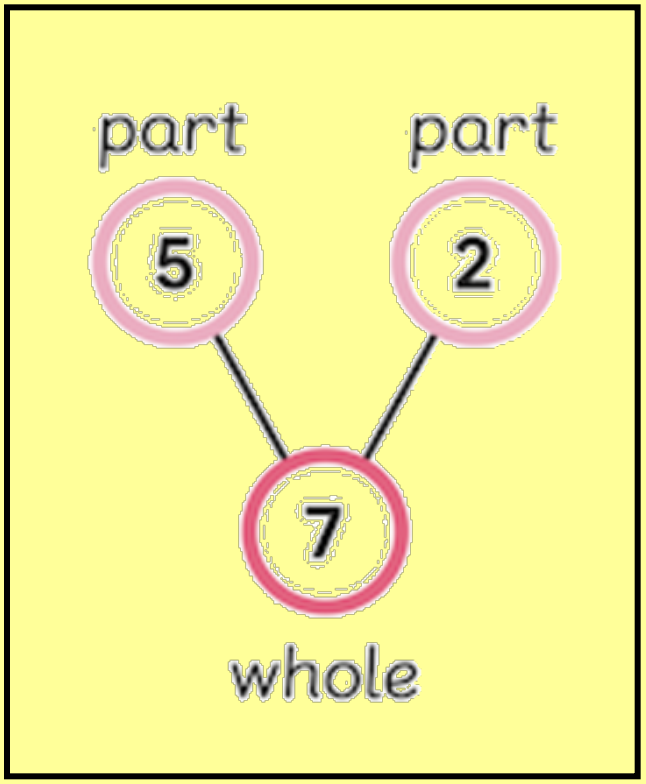
Why use part part whole?

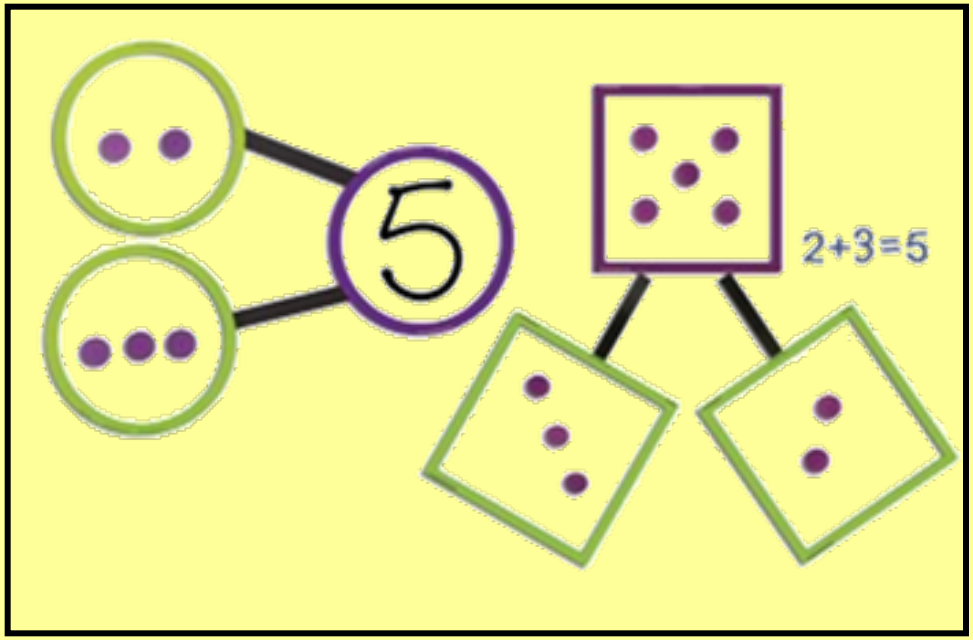
- Another very visual, practical way to understand numbers. They see that numbers can ne composed of smaller numbers.
- Can be done on a small or large scale!
- Can use anything around the home or garden to make yourself a part, part whole model!

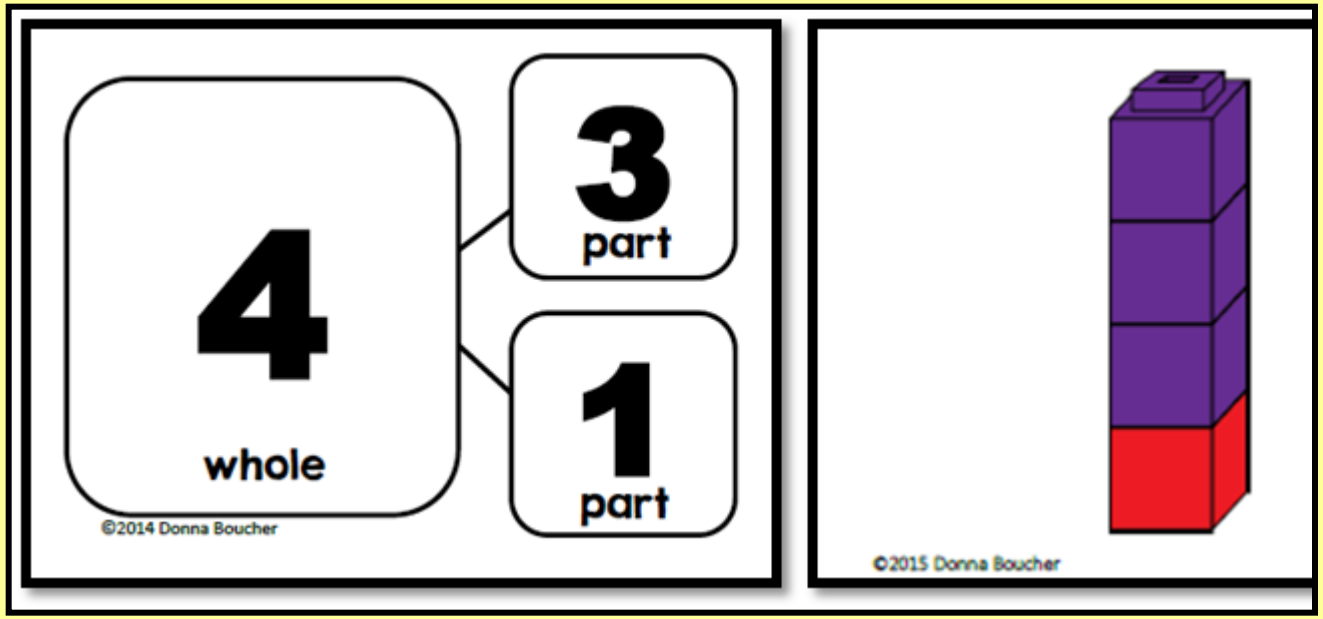


Part Whole Model




part
part
5
2
7
whole


5
2+3=5


4
whole
3
part
1
part
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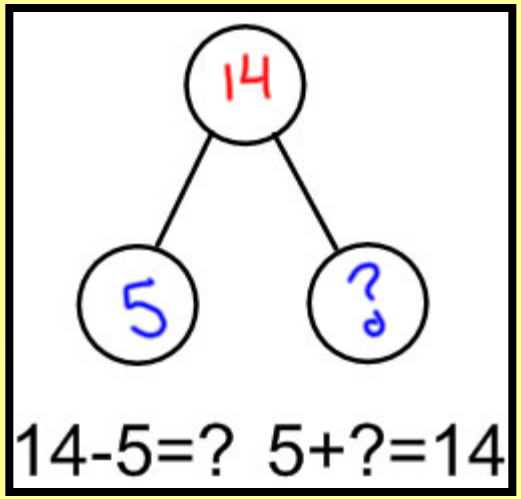
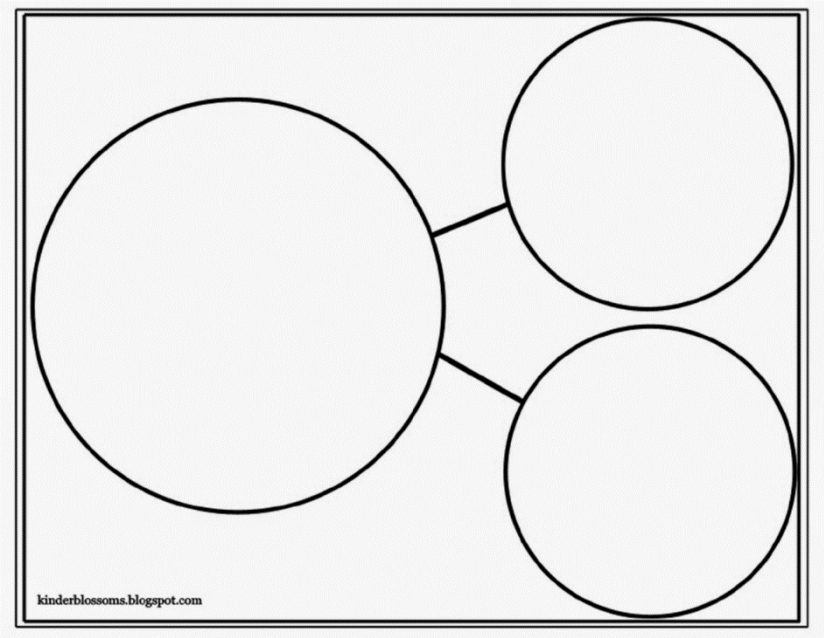

14
5
?
14-5=? 5+?=14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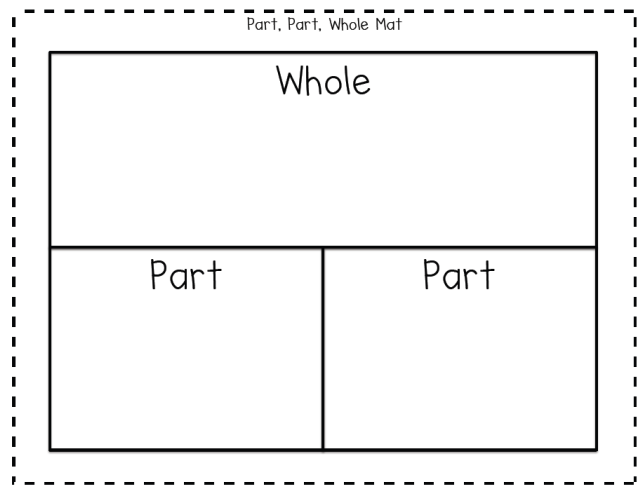
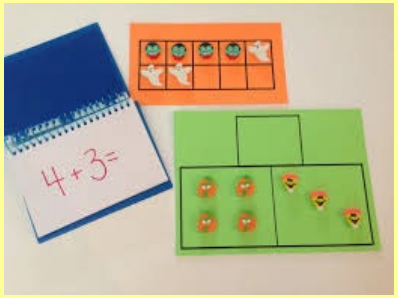

Part, Part, Whole Mat
Whole
Part
Part

Have a go...

- Pick 10 how many ways can you make it?
- Choose a number sentence and work out with your part part whole model.



Numberblocks – Cbeebies IPlayer

- Great for developing Early Number sense – The fiveness of five!
- Supports the Early Years and Year 1 and 2 curriculum. Part of the Mastering Number Progamme
- https://www.youtube.com/watch?v=xifpq8nCEzk

Stocking Fillers – all available on Amazon

Any Questions?