



EYFS Maths

Monday 12th February 2024



Expectations in Reception

Children in Reception will be learning to:

Number

- Count objects, actions and sounds
- Subitise (recognise a number without counting)
- Link the number symbol (numeral) with its cardinal number value.
- Count beyond 10
- Compare numbers
- Understand the 'one more than/one less than' relationship between consecutive numbers
- Explore the composition of numbers to 10
- Automatically recall number bonds for numbers 0–5 and some to 10.

Numerical patterns

- Select, rotate and manipulate shapes to develop spatial reasoning skills
- Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.
- Continue, copy and create repeating patterns
- Compare length, weight and capacity

End of Reception

Early Learning Goals (end of Reception)

Number

Children at the expected level of development will:

- 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.

End of Reception

Numerical Patterns ELG

- Children at the expected level of development will:
- 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.

Number skills

- Counting
- 1:1 Correspondence
- Using numbers to recognise how many there are in a set (matching quantity to numeral)
- Recognising numbers
- Subitising
- Ordering numbers
- Working out one more and one less than a given number
- Number composition (number bonds)
- Adding amounts in practical situations.
- Taking away in practical situations
- Sharing amounts

Numbers

Numbers are all around us and lots of games can be played with them. Such as:

- Can you find me a number 1 more or 1 one less than....?
- Which is the largest/smallest number?
- Can you order these numbers?



Numicon

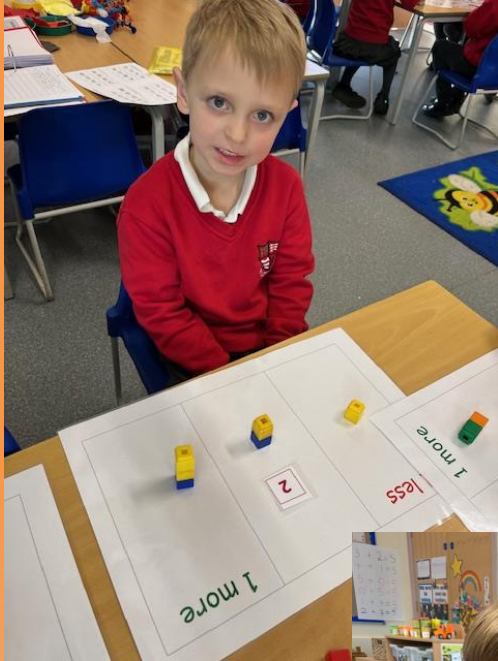


Numicon is a key resource used alongside other practical equipment (manipulative) or concrete representation.

We use Numicon to:

- Find the matching pair
- Count accurately
- Subitise
- Develop an understanding of the two numbers that can be added together a larger number.
- Weigh them
- Order them
- Finding one more and one less
- Place value (tens and ones) - teen numbers understanding 1 represents 1 group of 10

Adding and taking away



We use Numicon and objects to help us add and subtract.

- How many are there altogether?
- Who has more/less? How do you know?
- Can you use different numicon pieces to make 5? 10? 20?

Teaching for Mastery

- Changes to maths curriculum - 3 key aims problem solving, fluency and reasoning
- Greater focus on mental methods - beginning in Reception

What is mastery? If you drive a car, imagine the process you went through...

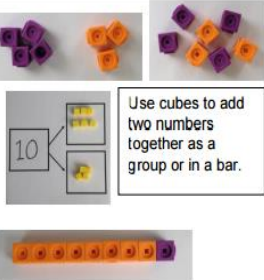
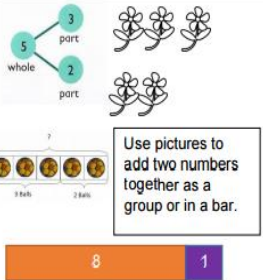


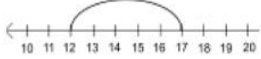


- The very first drive, lacking the knowledge of what to do to get moving
- The practise, gaining confidence that you are able to drive
- The driving test, fairly competent but maybe not fully confident
- A few years on, it's automatic, you don't have to think about how to change gears or use the brake
- Later still, you could teach someone else how to drive or drive in any situation

Concrete, Pictorial and Abstract

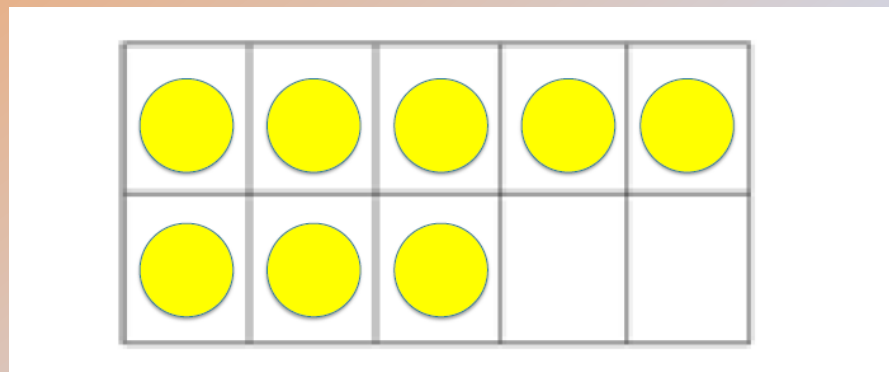
Progression in Calculations

Addition

Objective and Strategies	Concrete	Pictorial	Abstract
Combining two parts to make a whole: part-whole model	 <p>Use cubes to add two numbers together as a group or in a bar.</p>	 <p>Use pictures to add two numbers together as a group or in a bar.</p>	$4 + 3 = 7$ $10 = 6 + 4$  <p>Use the part-part whole diagram as shown above to move into the abstract.</p>
Starting at the bigger number and counting on	 <p>Start with the larger number on the bead string and then count on to the smaller number 1 by 1 to find the answer.</p>	$12 + 5 = 17$  <p>Start at the larger number on the number line and count on in ones or in one jump to find the answer.</p>	$5 + 12 = 17$ <p>Place the larger number in your head and count on the smaller number to find your answer.</p>

Tens Frames

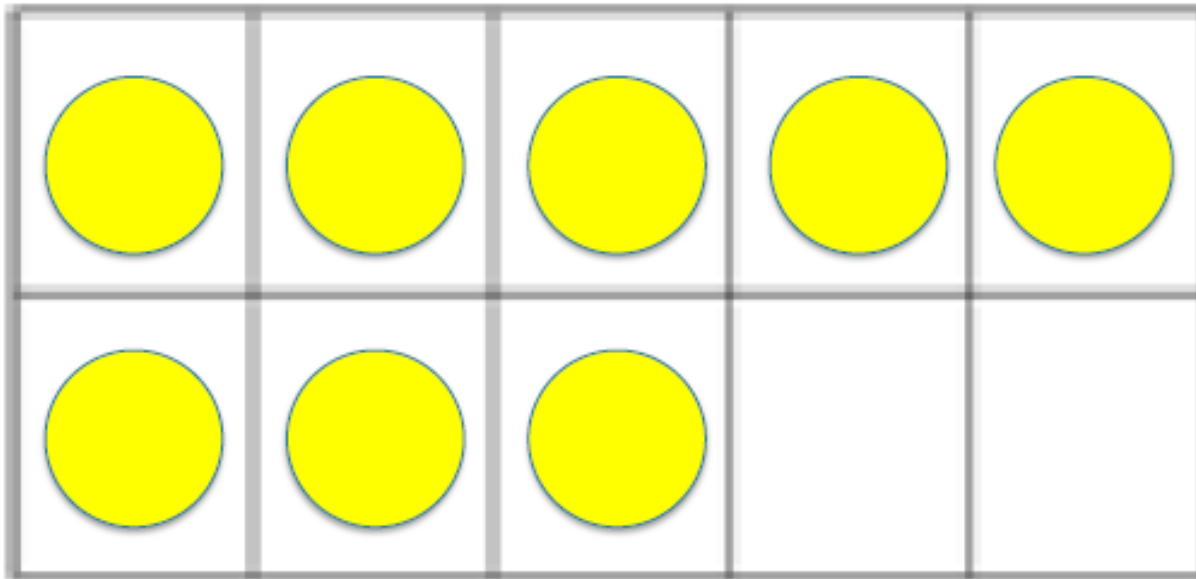
A Tens Frame is a simple tool that supports the understanding of numbers and gives a consistent way to explore numbers through play and active learning.



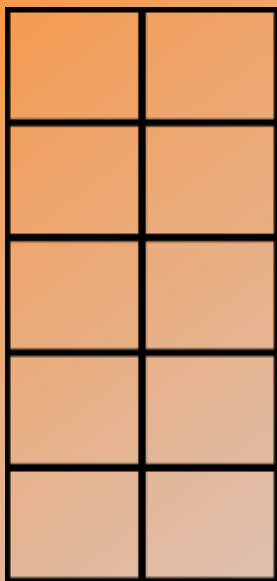
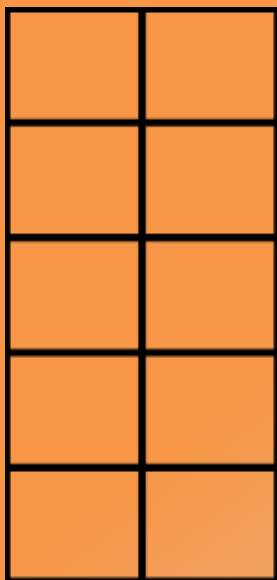
Reception

- Five Frame to develop number sense to 5 and the ability to subitise
- Recognise the numbers in different combinations with an element of speed
- Seeing numbers made with different combinations supports the children to develop their number sense, as it prompts them to notice connections between the numbers

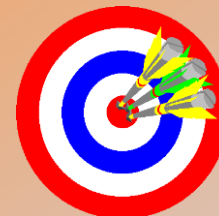
**How many dots are in the ten—frame?
How did you figure it out?**



Which mathematical skills did you
use to do this?



Ten frame target game



Choose your target number– it could be 10, 20 or even 30 if you have enough 10 frames!

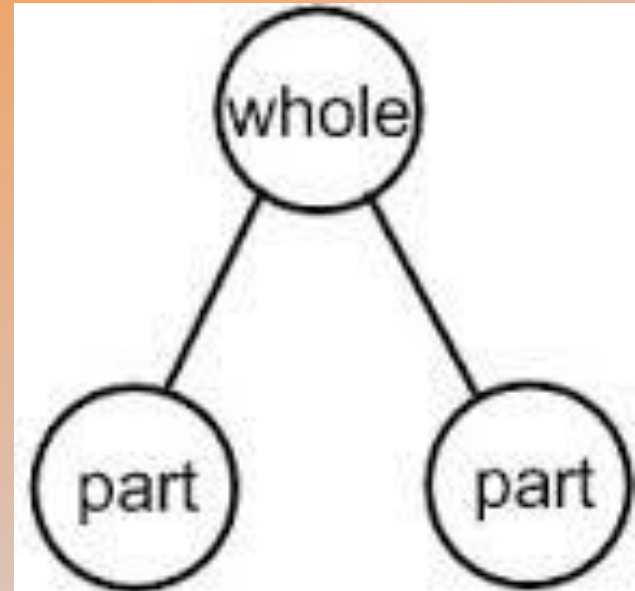
With a partner, decide who will go first

- Select a colour of counter each
- Roll the dice and put that many counters on the ten frame.
- Now it's your partner's go. Roll the dice and put that number of your counters on the ten frame – remember to say and record the number sentences as you go!
- Take it in turns until someone reaches or goes over the target number.

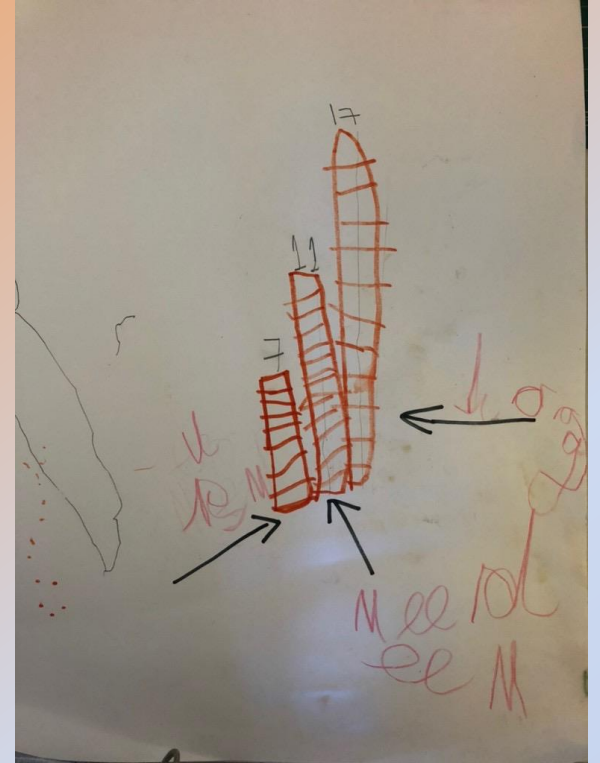
You can also play this as a counting down to zero game

Part Part Whole

- Addition
- Sharing equally
- Subtraction
- Inverse eg $2+3=5$
- $5-3=2$



Measuring



Problem solving and number activities can be a part of our day from the moment we wake up.

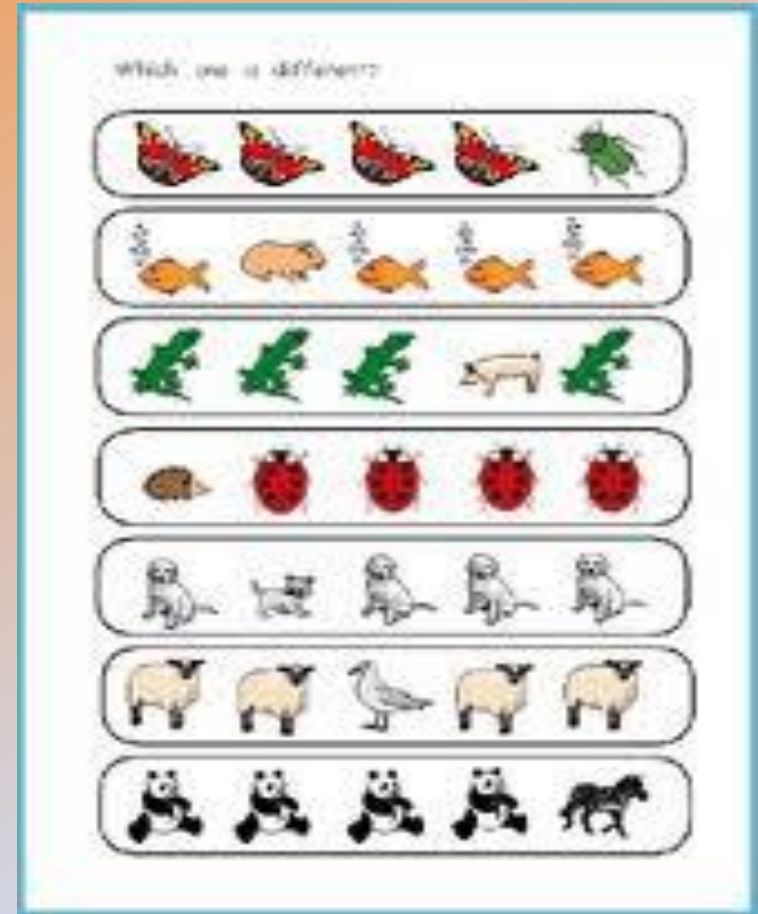


How much time we have to get ready?

What time is it?



Can you find a matching pair of socks? Which is the odd one out?



Matching the items on the list
to the things on the shelves.
Can you find 2 tins of beans?



Can you find 3 big apples?



Can you find a smaller packet of crisps?



Can you find the tea bags that come in a pyramid shape?

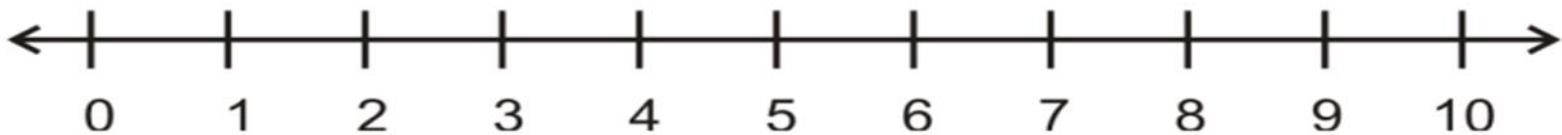


Putting the shopping away can also offer lots of opportunities for learning

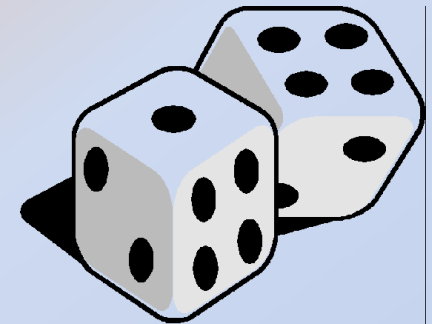
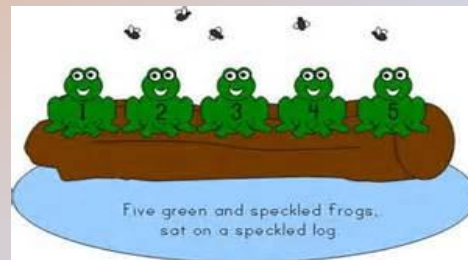
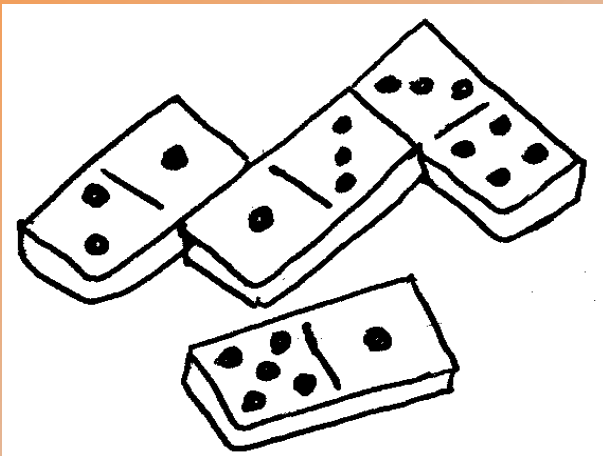
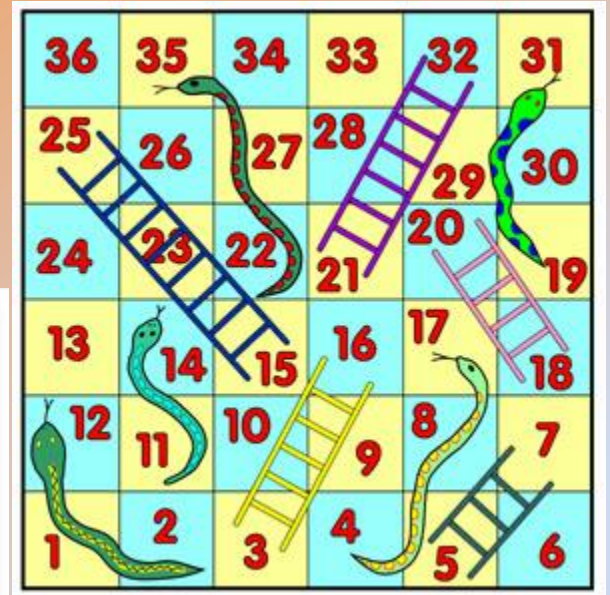
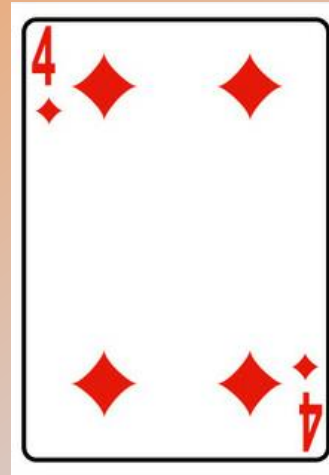
- Can you put all the boxes with straight edges in this bag?
- How many will fit in the cupboard/ on the shelf?
- Is the item heavy or light?
- Is the packaging big or small? Is it bigger/smaller than

How can I support my child?

- What is the total of the numbers on these dice?



How can I support my child?



At Home

- Quick fire fingers
- Mental rapid facts
- Arranging things in different ways
- Noticing numbers in the environment
- Counting
- Number games!

These are just a few ideas you could use to help your child understand maths and problem solving. Most of all have fun!

