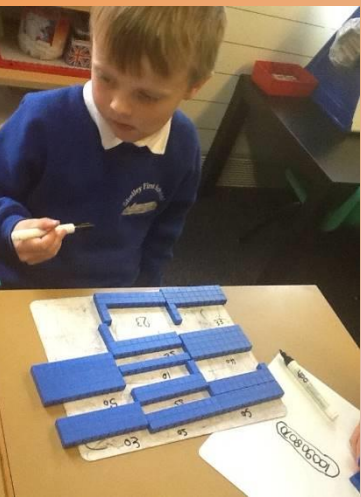


Reception Maths

Wednesday 9th October
2019



Early Days and Next Steps

Early Learning Goal (end of Reception) Number

- Count reliably with numbers from one to 20
- Order numbers from 1-20
- Say which number is one more or one less than a given number.
- Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.
- Can solve problems, including doubling, halving and sharing.

Early Days and Next Steps

Early Learning Goal (end of Reception) Shape, Space and Measures

- Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities, objects and solve problems.
- For example: Capacity – comparing quantities in the water. Full/empty etc.
- For example: Size – comparing objects from biggest to smallest.
- Recognise, create and describe patterns.
- For example: Making a repeating pattern.

We teach maths skills through...

- Carpet session each day linked to Maths
- Maths access in provision
- Lots of talking and reasoning
- Problem Solving
- Self-discovery and exploring
- Using manipulatives
- Asking questions
- Real-life learning
- Practical lessons
- Small group work

Observations

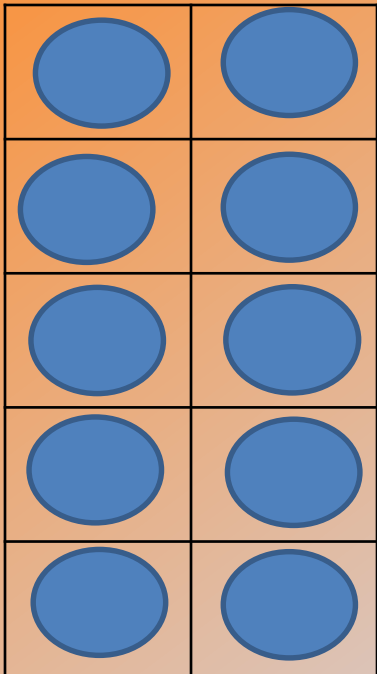
- We observe the children in provision and plan appropriately for next their individual next steps below is an example.
- *e.g. Ella is fascinated by lining objects up, wherever she is working. We have observed that and take photographs and gather quotes of what Ella says. Then after next taught session say on 2D shape – we ensure there are plenty of shapes there for her , ready to push her further. We have then extend learning through questioning “how many different 2D shapes have you used to make your 'castle'? Can you write it down and stick next to it?”.*

The value of numbers cont..



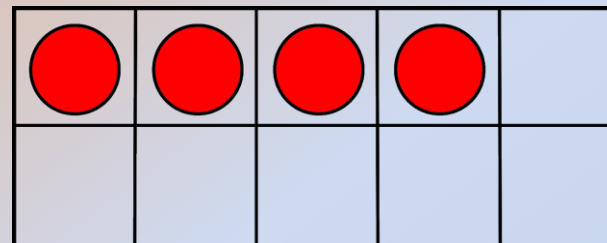
Children need to understand the value of numbers to 20. We teach this through using apparatus. Such as unifix cubes, numicon, tens frames and base 10.

Now your turn! Pick a numeral card and represent the number using different apparatus.



The value of numbers

- Children need to know the '4ness of 4' what it looks like in a line, in a circle, in a clump, which numbers are next to it, how to write the numeral how to write the word etc.

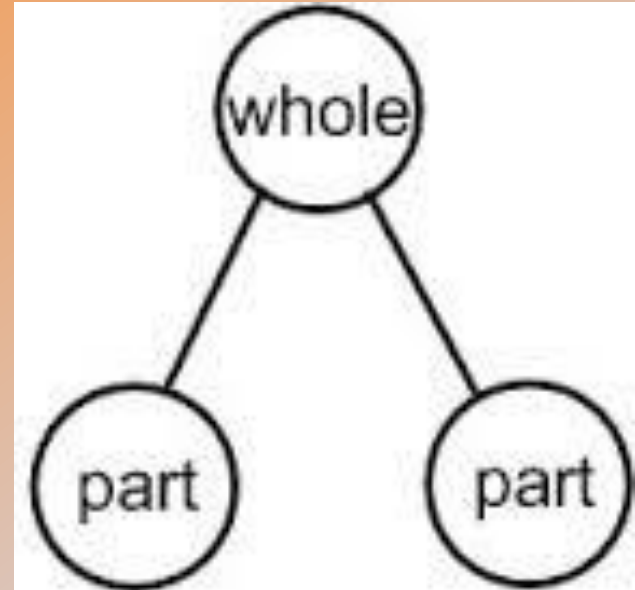


Addition and Subtraction

- We introduce addition and subtraction with practical apparatus and vocabulary before introducing the mathematical symbols: +, - and =.
- For example: I have 5 raisins and I get 2 more. How many do I have altogether? I have 3 raisins and I eat one. How many do I have left?

Part Part Whole

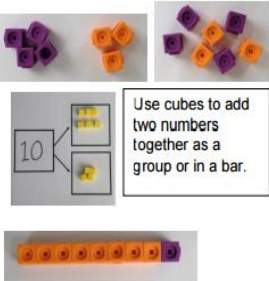
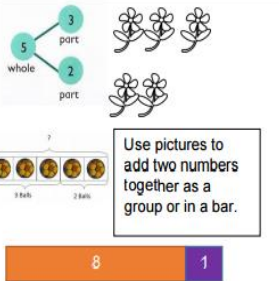
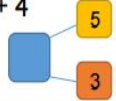

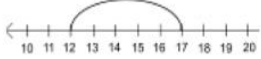
- Addition
- Sharing equally
- Subtraction
- Inverse e.g. $2+3=5$
- $5-3=2$



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>

Division (Sharing)

In reception we teach division through sharing apparatus into equal groups.

The apples need putting into bags with 5 apples in each bag. Julie has 15 apples. How many bags will she need?



Therefore, this means that 15 apples shared by 5 equals 3

Shape, Space and Measure

In school we explore space and measure through baking, water and sand as well as focusing activities with an adult.



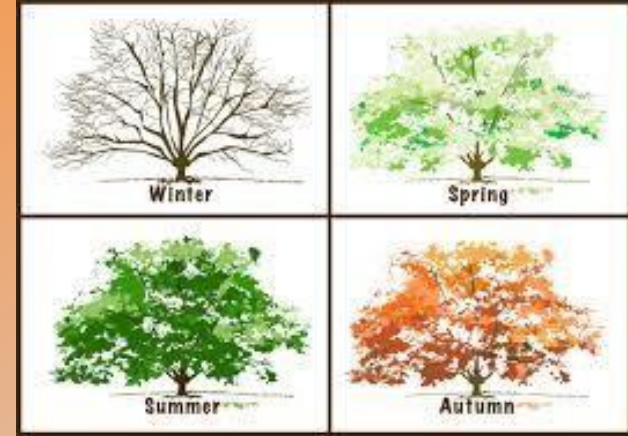
We learn our shapes through focussed adult sessions. For example going on a shape hunt. Designing and building and songs.



Time

Children need to have a concept of time. Such as morning/afternoon/evening.

Children need to know specific times in the day such as breakfast time, dinner time, tea time, home time and bed time.



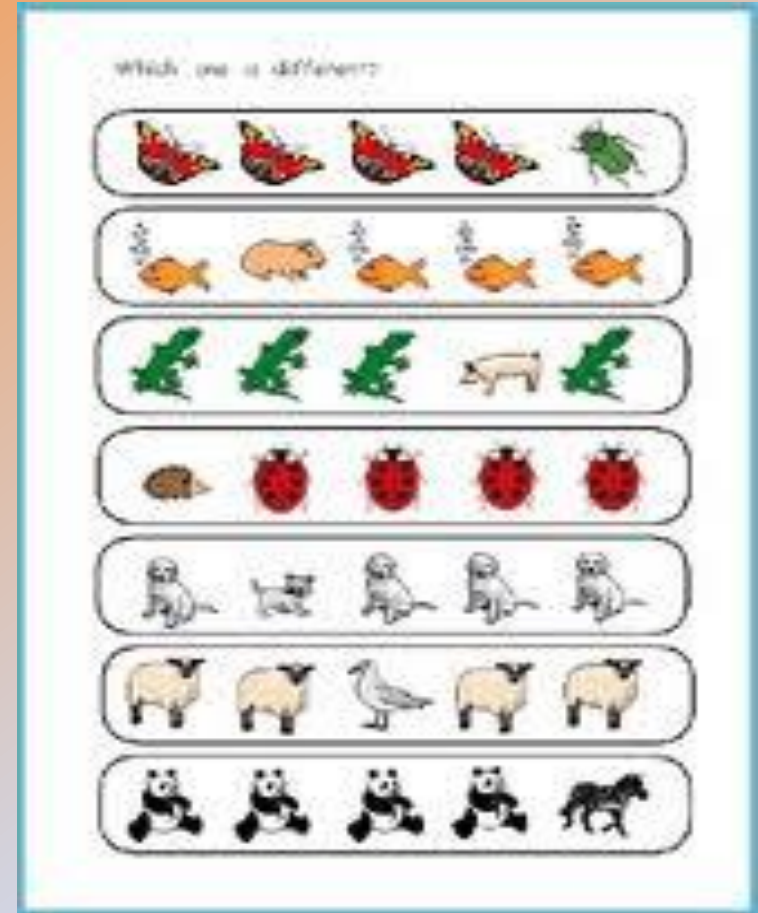
How you can help at home

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?



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



Going shopping has lots of opportunities for learning such as recognising numbers, understanding the concept of money and identifying shapes such as a can (cylinder).

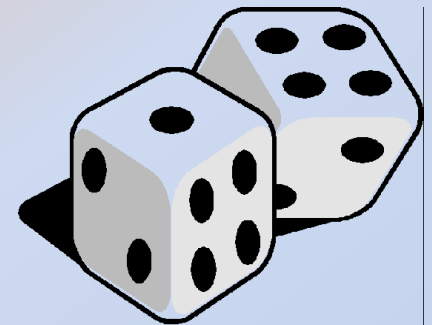
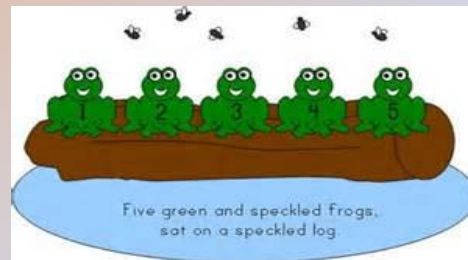
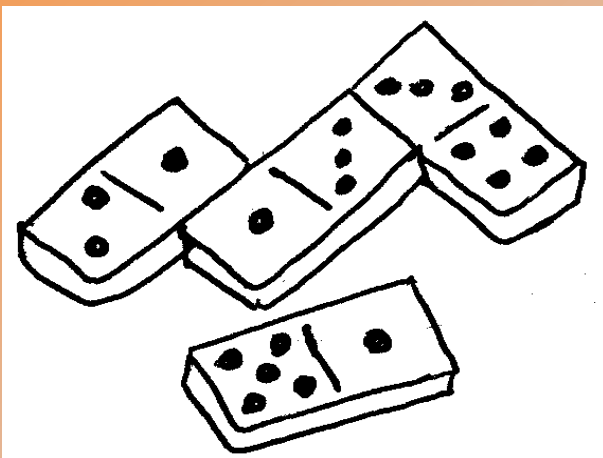
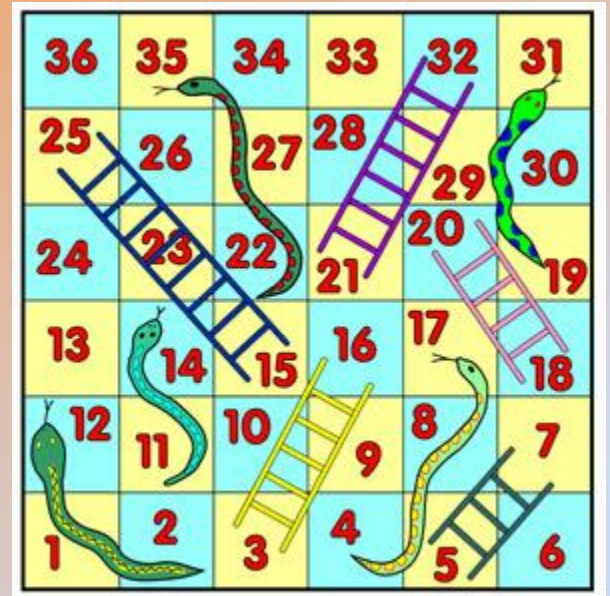
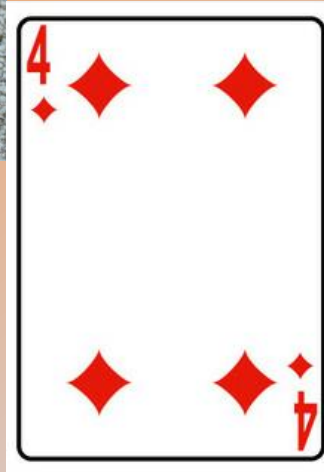




Putting the shopping away can also offer lots of opportunities for learning

- 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

What you can do at home



Other things you may wish to do at home

- Quick fire fingers
- Counting Songs
- Counting objects such as the stairs, cutlery,
- Using mathematical vocabulary
- Talking about the times in the day, days of the week, month, year etc.
- Maths games on IPad/ Phone/ Computer

TV / Websites you could use at home

- Splat – 100 square
- Top Marks – Game for all aspects of maths
- YouTube – Counting Songs
- TV program – Number Blocks, Number Jacks
- CBeebies – Numeracy Little learners

Any Questions....