Reception Mathematics Workshop – Maths in the Early Years

Aims

- To give you a better understanding of the Maths curriculum and what we teach in the EYFS.
- To show you the resources we use and how they support Maths learning in school.
- To give you an opportunity to work with your child
- To give you some ideas of how you can support your children at home.

Our curriculum

At Hunters Hall, we have our own maths curriculum which follows **White Rose Maths**

We teach new skills

- As a whole or half class
- In smaller groups

We believe that ‘maths is everywhere’. We are always seeking ‘**in the moment**’ opportunities for maths teaching and learning.

Autumn Progression

Number and Place Value	Numbers to 5	One, two, three
		Four
		Five
Addition and Subtraction	Sorting	Sorting into groups
Number and Place Value	Comparing groups	Comparing quantities of identical objects
		Comparing quantities of non-identical objects
Addition and Subtraction	Change within 5	One more
		One less
Measurement	Time	My day

Spring Progression

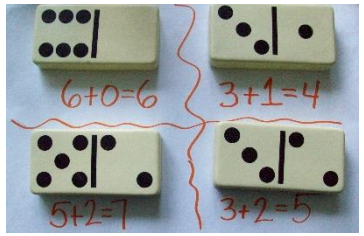
Addition and Subtraction	Numbers to 5	→ Introducing zero
		→ Number bonds to 5
Number and Place Value	Numbers to 10	→ Counting to 6, 7 and 8
		→ Counting to 9 and 10
		→ Comparing groups up to 10
Addition and Subtraction	Addition to 10	→ Combining two groups to find the whole
		→ Number bonds to 10 – ten frame
		→ Number bonds to 10 – part-whole model
Geometry	Shape and space	→ Spatial awareness
		→ 3-D shapes
		→ 2-D shapes

Reception - Notes and guidance

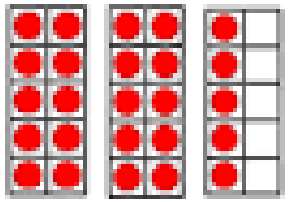
Summer Progression

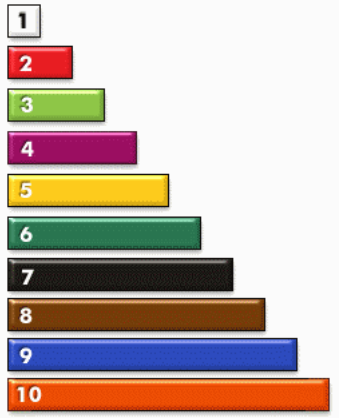
Geometry	Exploring patterns	→ Making simple patterns
		→ Exploring more complex patterns
Addition and Subtraction	Count on and back	→ Adding by counting on
		→ Taking away by counting back
Number and Place Value	Numbers to 20	→ Counting to 20
Multiplication and Division	Numerical patterns	→ Doubling
		→ Halving and sharing
		→ Odds and evens
Measurement	Measure	→ Length, height and distance
		→ Weight
		→ Capacity

Concrete and pictorial resources



Ten Frame



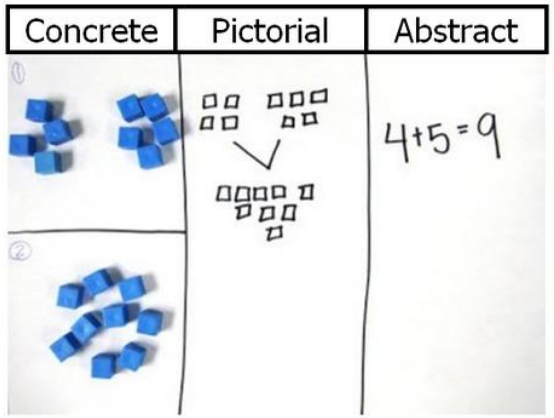


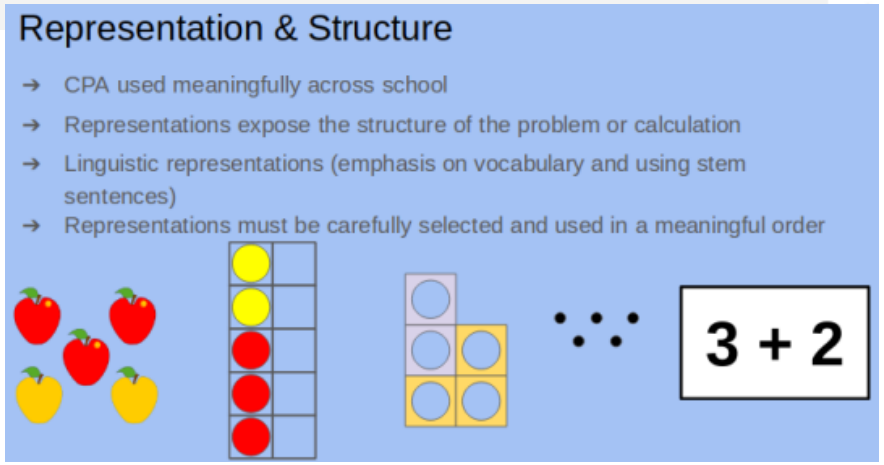
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

CONCRETE – PICTORIAL – ABSTRACT

- **Concrete** – students should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.
- **Pictorial** – students should then build on this concrete approach by using pictorial representations. These representations can then be used to reason and solve problems.
- **Abstract** – with the foundations firmly laid, students should be able to move to an abstract approach using numbers and key concepts with confidence.

- **Language** – using, understanding and explaining the meaning of mathematical vocabulary is essential for depth in mastery.





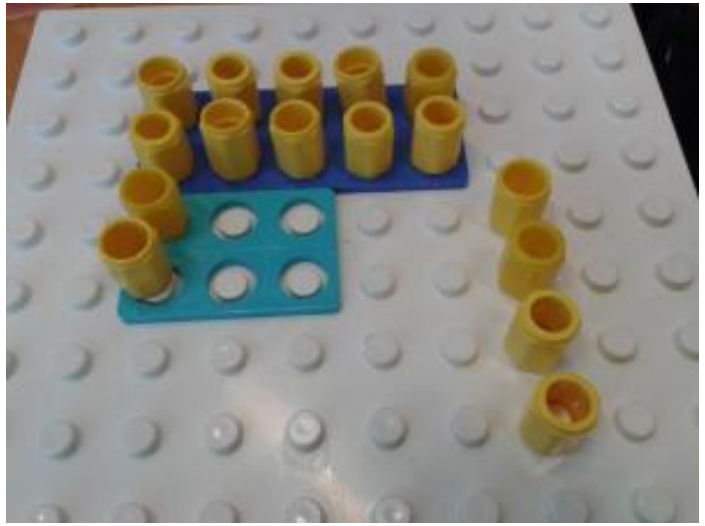
Numicon – number shapes.

Children learn these shapes represent a number and then use these shapes for calculations.

Activity – Can you use the counting resources to solve this number sentence –

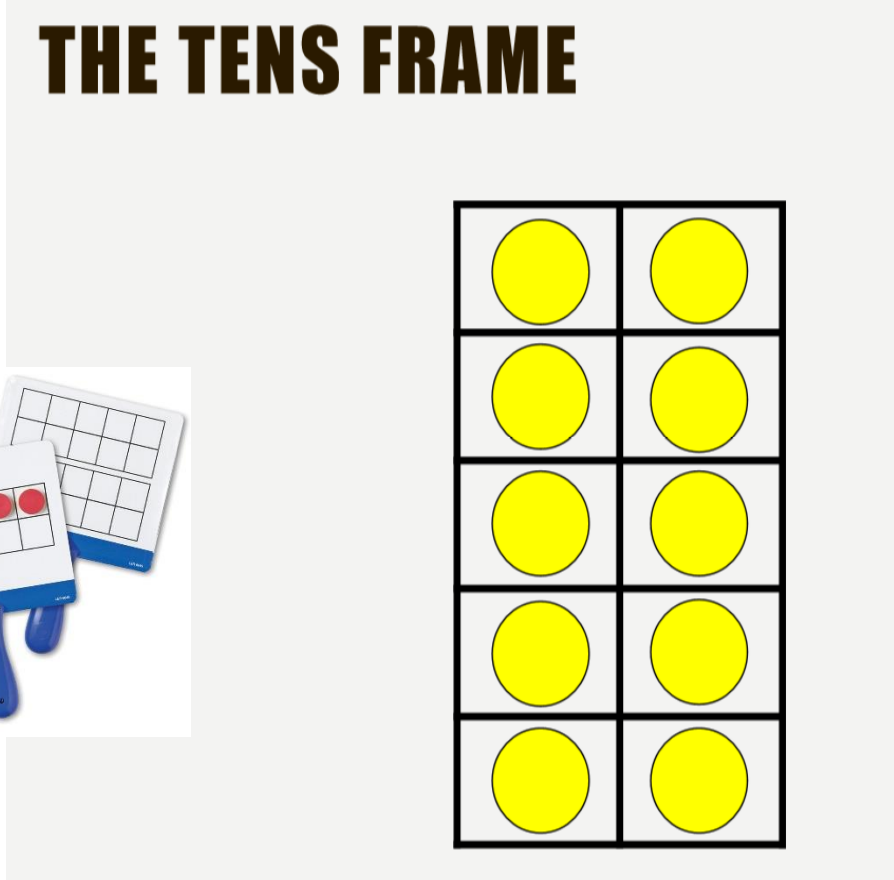
7+3=

Numicon – for subtraction, halving and doubles



Numicon allows children to ‘see’ doubling and halving.

Using the tens frame as a structure:



Subitising numbers - instant number recognition.

"A strong 'sense of ten' needs to be developed as a foundation for both place value and mental calculations" – Jenni Way, Professor of Maths.

Subitising – what can you see?

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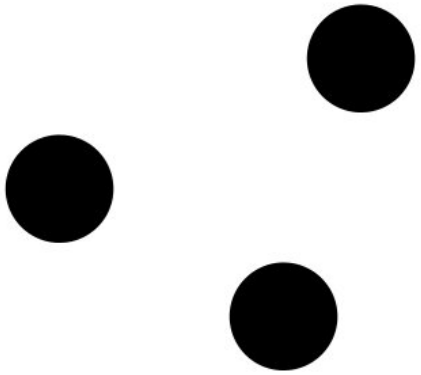

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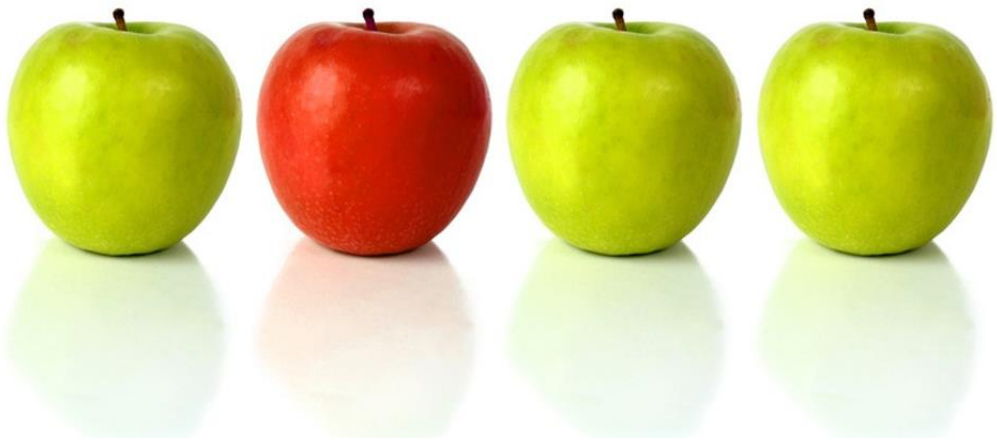
Subitising – What can you see?



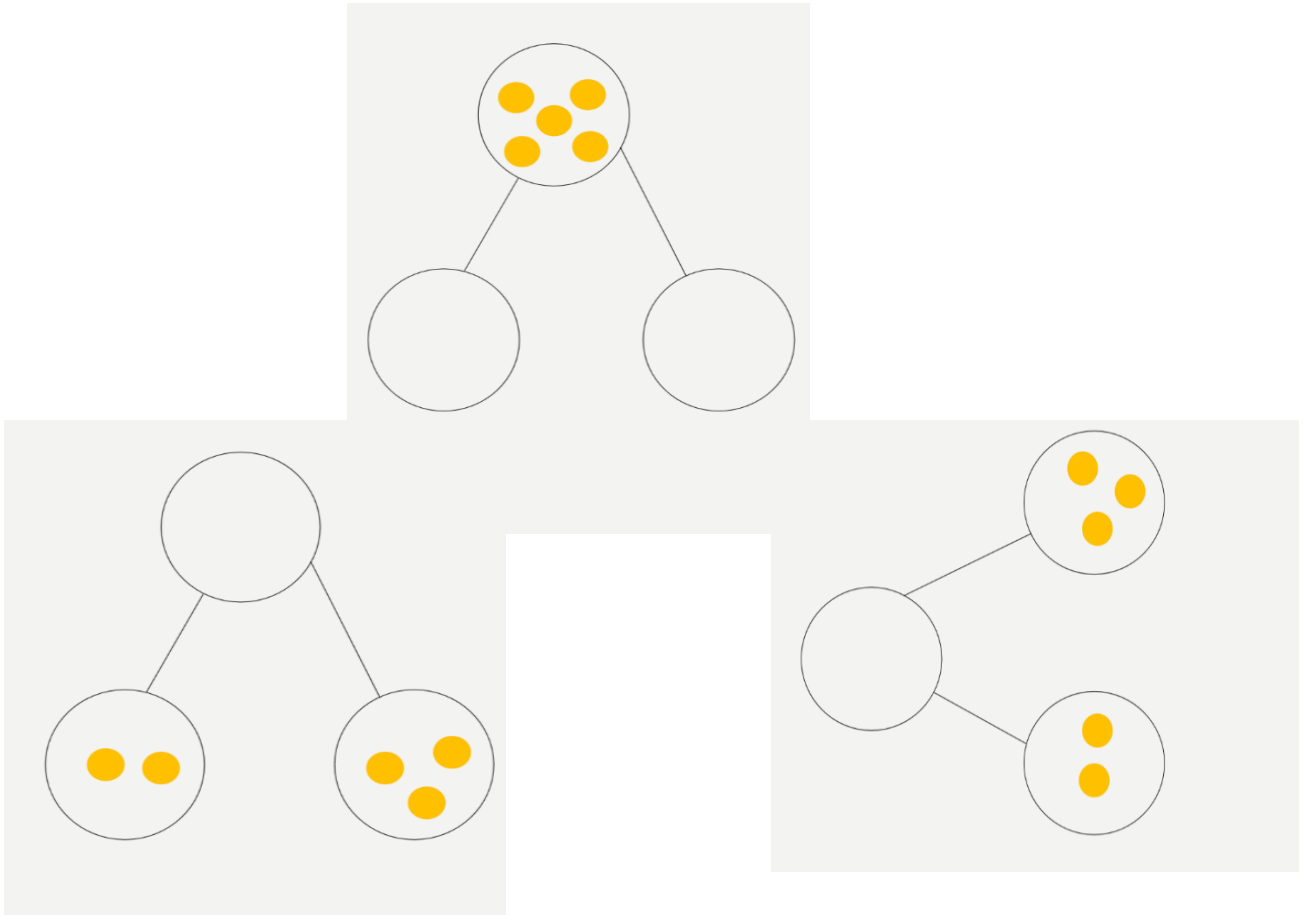
Part - Part – Whole – Structures

These enable children to see the maths happening (and can be built upon as children move through the year groups)

Concrete resource.

Part - Part – Whole (Moving from concrete to pictorial)

Pictorial structure – to support addition, number bonds, equality, related number facts.



Then, moving from pictorial to abstract.

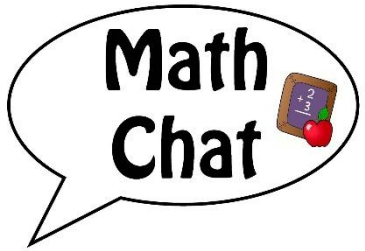
5 = 2 + 3
2 + 3 = 5

3 + 2 = 5

1 + 4 = 5
4 + 1 = 5

5 + 0 + 5
5 + 0 = 5

'Talking the Maths' – creating curiosity



"I'm thinking of a number ……." Any ideas what it could be?

Clues:

"It's less than 11".

"It has 1 digit"

"It's more than 6".

"It has straight lines when you write this number"

If we all have a cake how many will be left? Do we have enough?

Matching the items on the list to the things on the shelves. Can you find 4 tins of beans?

Get the packet of tea with the pyramid bags please.

Can you find a matching pair of socks?

Would you like 2 pieces of toast? Can you cut it in half? How many pieces?

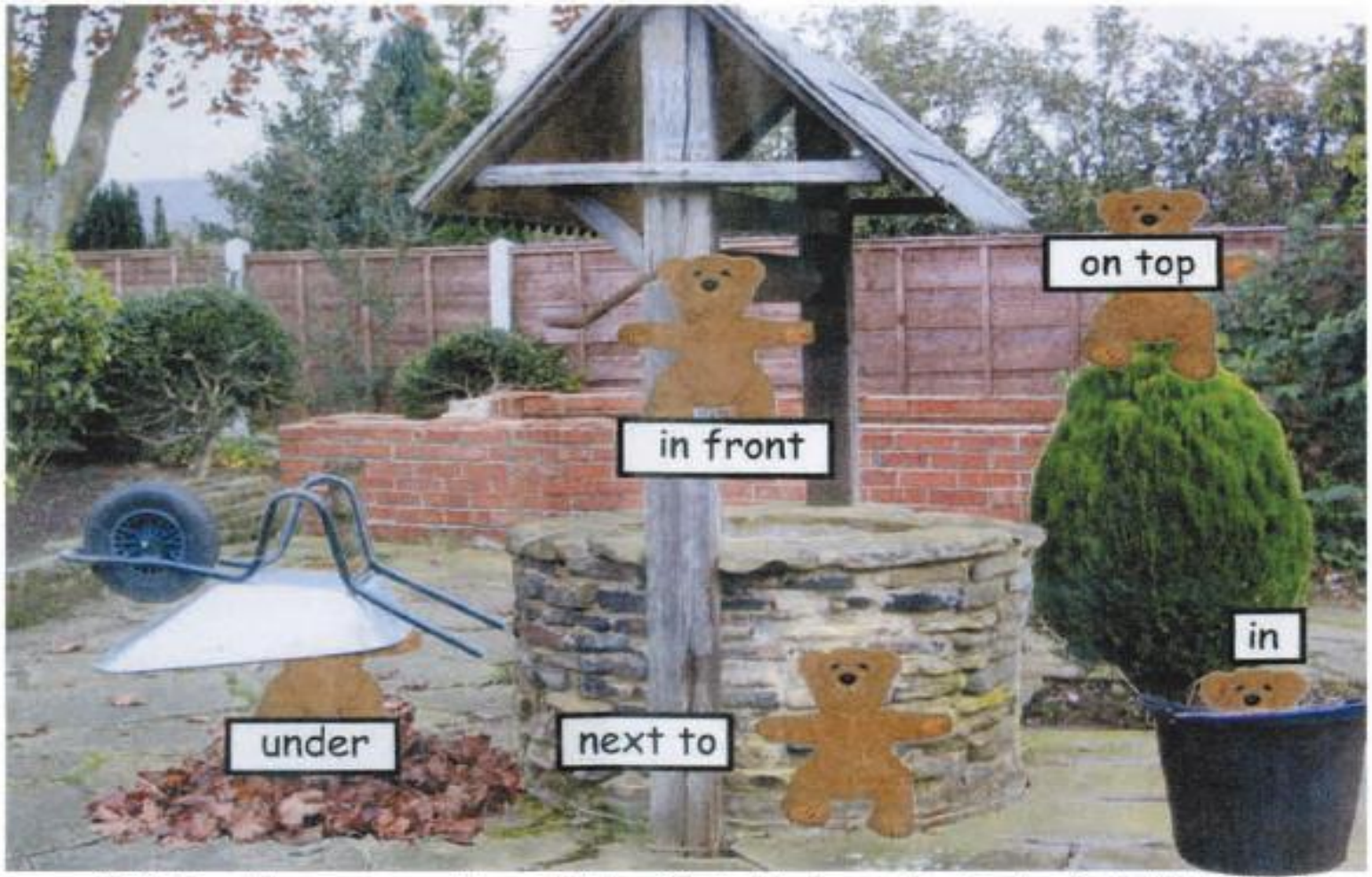
Sharing (early division)

- Can you share the 12 sweets between the 3 toys? How many sweets do they get each?

“ 12 shared between 3 is 4.”

How much time do we have to get ready?
What time is it?

Positional language



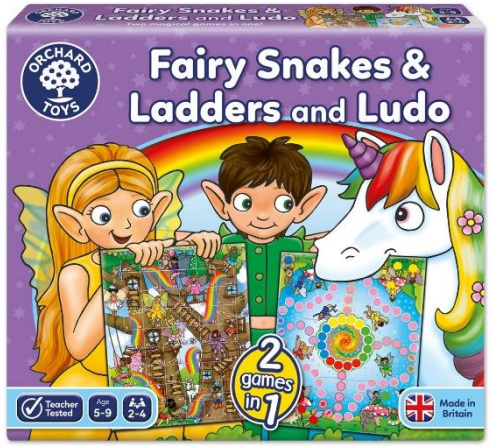
AI Hakima did some super position work today. She had to choose where to place the teddy bears in the garden and then tell me where she had put them using position words. Hakima then matched the label to where each teddy was by

Shapes

- Name basic 2D and 3D shapes and talk about their properties.

Numbers are all around us and lots of games can be played with them. Such as, find me a number 1 more than or 1 less than. Can you find one the same?

"Board games boost early maths skills" https://www.theguardian.com/education/2008/mar/25/schools.uk3



Thank you for coming!