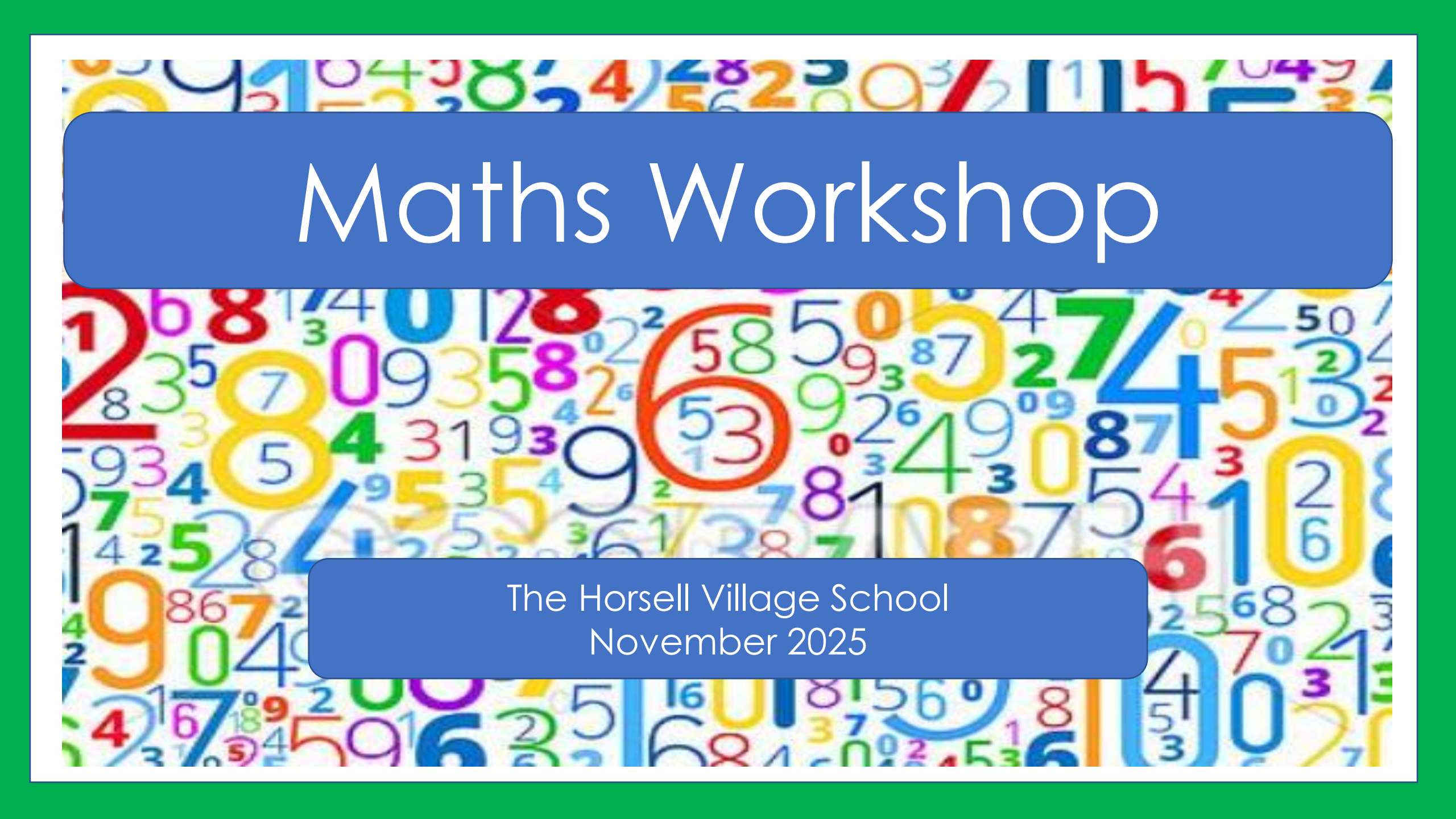


The background of the slide is a dense, colorful pattern of various numbers (0-9) in different sizes and colors (red, blue, green, yellow, orange, purple, etc.).

Maths Workshop

The Horsell Village School
November 2025

The aims of this presentation are to share with you :

- Our Intent.
- The aims of the EYFS Curriculum.
- The aims of the Maths National Curriculum.
- What does Maths look like at HVS?
- Developing Number sense.
- Developing other aspects of Maths.



Our Intent:

- We ensure that the curriculum design allows for small secure steps and acknowledges the importance of the children being secure and fluent in a concept before moving on to the next level.
- Pupils are required to explore and investigate Maths in depth, using mathematical vocabulary to reason and explain their workings.
- A wide range of mathematical resources are used in lessons and pupils are taught to show their workings using concrete materials, before establishing ways of pictorially and formally representing their understanding.
- We encourage children to respond positively to challenge, developing resilience in all aspects of maths learning as well as self-reflection in order to identify next steps in their learning.
- There is a Number focus in day-to-day teaching and learning as we want pupils to develop confidence and mental fluency with whole numbers, counting and place value.



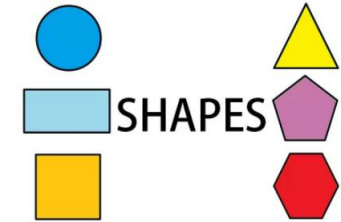
What does a Maths lesson look like?



Questioning is a key part of Maths. The teacher will ask key questions designed to prompt investigation and exploration.

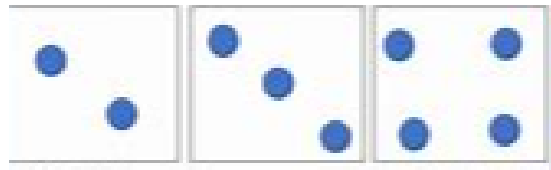


EYFS Curriculum:



- EYFS Statutory Educational Programme:

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the **numbers to 10**, the relationships between them and the patterns within those numbers.



End of Year Expectation:

Number

Early Learning Goal

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.



Numerical Patterns

Early Learning Goal

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.

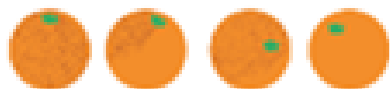
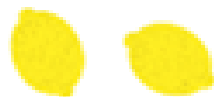
In Reception the children will be learning to:

- Count objects, actions and sounds.
- Subitise.
- Link the number symbol (numeral) with its cardinal number value.
- Count beyond ten.
- 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.
- 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.
- Copy, continue and create repeating patterns.
- Compare length, weight and capacity.

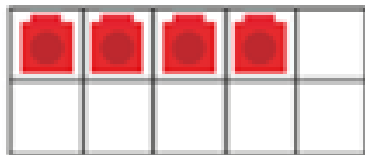
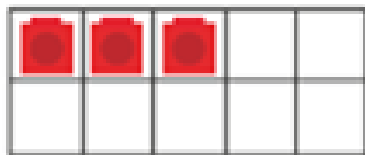
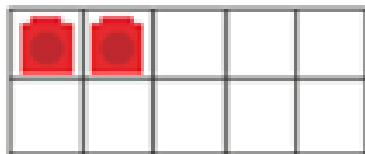
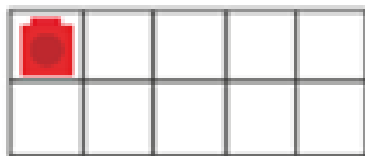


What do we do to help children?

Concrete
(Physical Objects)



Pictorial
(Drawings/Models)



Abstract
(Using numbers)

1

2

3

4

Concrete and pictorial representations support children to understand abstract concepts and deepen their knowledge.

What is number sense?

Number sense refers to a child's fluidity and flexibility with numbers.

It helps children understand what numbers mean, increasing mental mathematics and giving children the tools to look at maths in the outside world and make comparisons.



So..... What is number sense and why is it so important?



Number sense is the main focus in the Early Years Curriculum and forms an essential part of fluency for all year groups.

How do we help develop Number sense?

Subitising

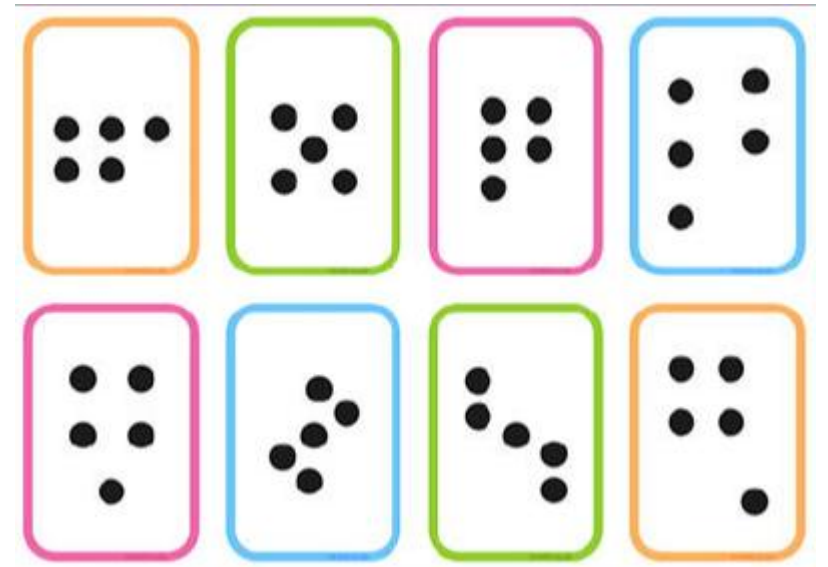
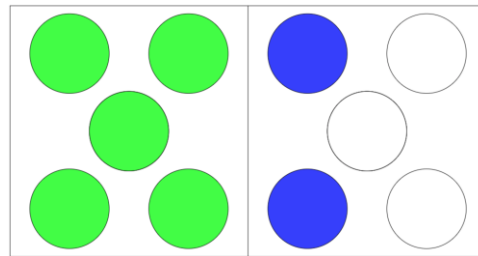
Don't count, say the amount.

Children need a variety of opportunities to see regular amounts of quantities and be encouraged to 'say what they see.'

These regular amounts also need to be shown in irregular ways:

* conceptual subitising
(seeing smaller numbers)

* perceptual subitising
(seeing numbers straight away)



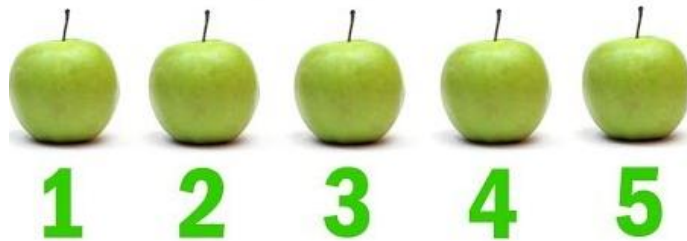
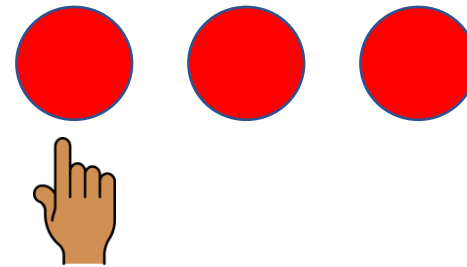
How do we help develop Number sense?

Counting

3 rules of counting

1. Count everything once
2. Say the numbers in the right order
3. The last number you say is how many there are

1:1 correspondence



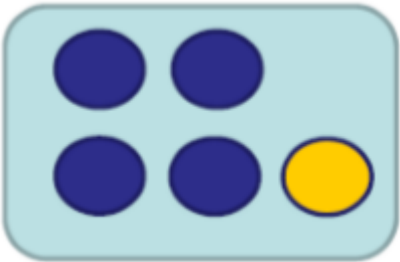
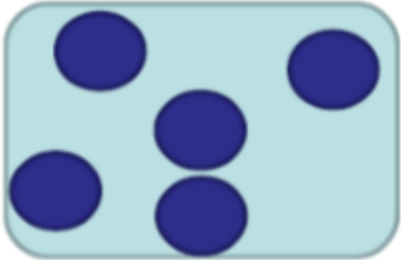
How do we help develop Number sense?

Cardinality

Cardinality means the quantity or total number of items in a set.

This can be determined by subitising or counting.
While subitising allows children to perceive the cardinality of small sets, counting requires them to understand that the last number in the counting sequence represents the quantity of the set. We refer to this as....

'The 5-ness of 5'

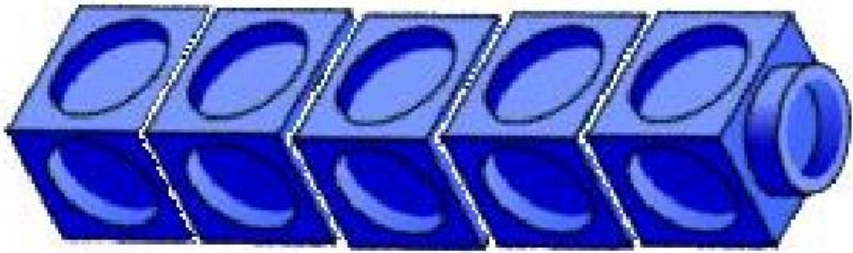
Familiar dot patterns	Structured dot patterns	Unstructured dot patterns
		

How do we help develop Number sense?

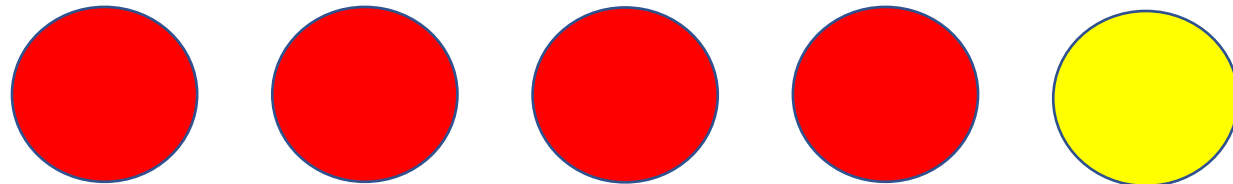
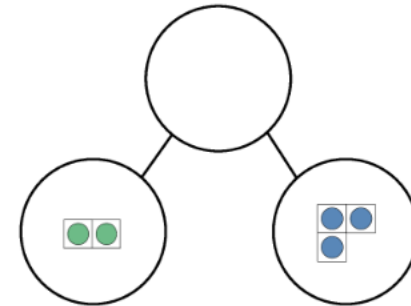
Composition

Composition refers to knowing numbers are made up of two or more smaller numbers.

For example



5 is the whole
2 is a part and 3 is a part



4 is a part and 1 is a part
5 is the whole

The program 'Number blocks' focuses on the concept of Composition.

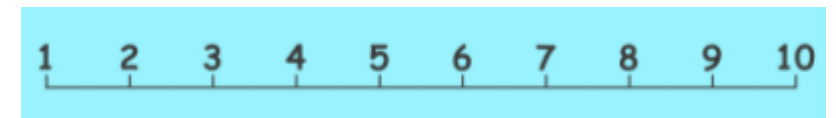
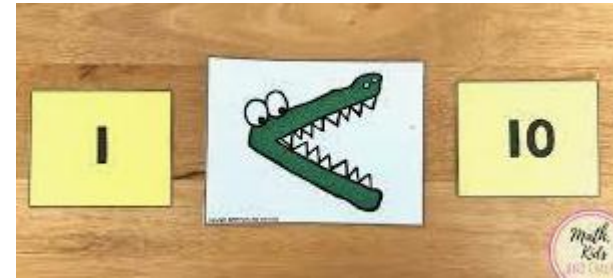
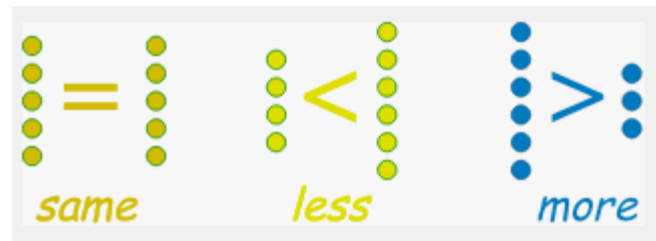
Being able to see numbers within numbers helps to develop efficient calculating skills.



How do we help develop Number sense?

Comparison

When we ask children to compare numbers we are asking them to examine the difference, to decide if one number is greater than, smaller than or equal to another number. This understanding underpins the mental number line which children will develop later. E.g. How much bigger or smaller they are than each other.

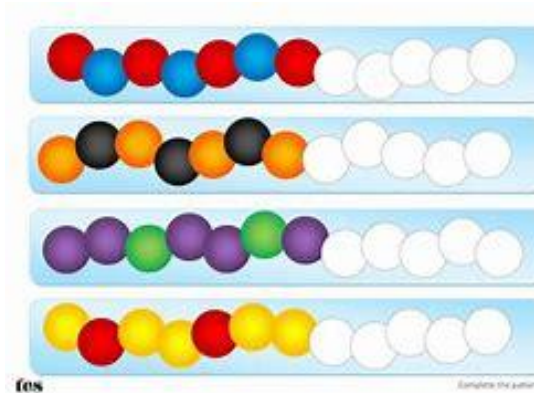


What else do we cover in EYFS?

Pattern

Developing an awareness of pattern helps young children to notice and understand mathematical relationships.

We begin by continuing an AB pattern, copying an AB pattern and then developing our own AB patterns. We can then progress into ABB ABC ABBC patterns.



Shape and Space

Shape and space in EYFS is about developing visualising skills - understanding what happens when shapes move or combine with other shapes.



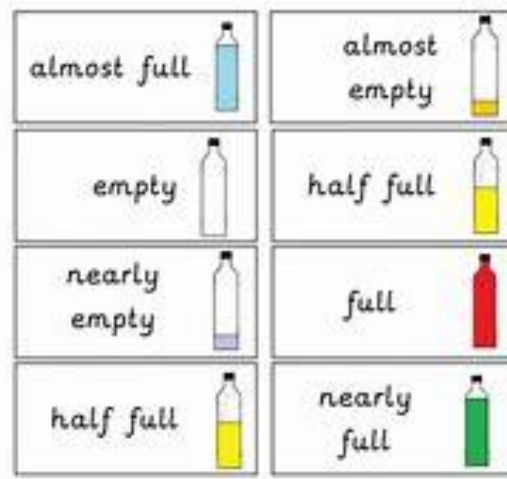
Measures



First, we need to decide which attribute is being measured - length, capacity, weight.

Can children find something that is longer/shorter or heavier/lighter than a given item?

After lots of practical experience with comparing items, children can then begin to estimate and predict.



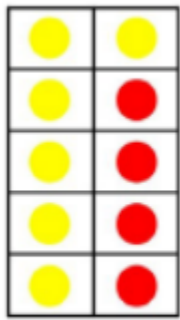
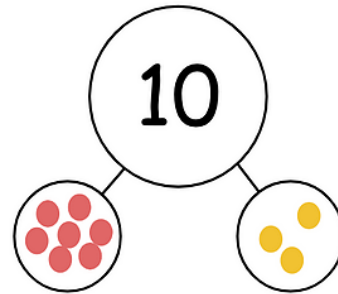
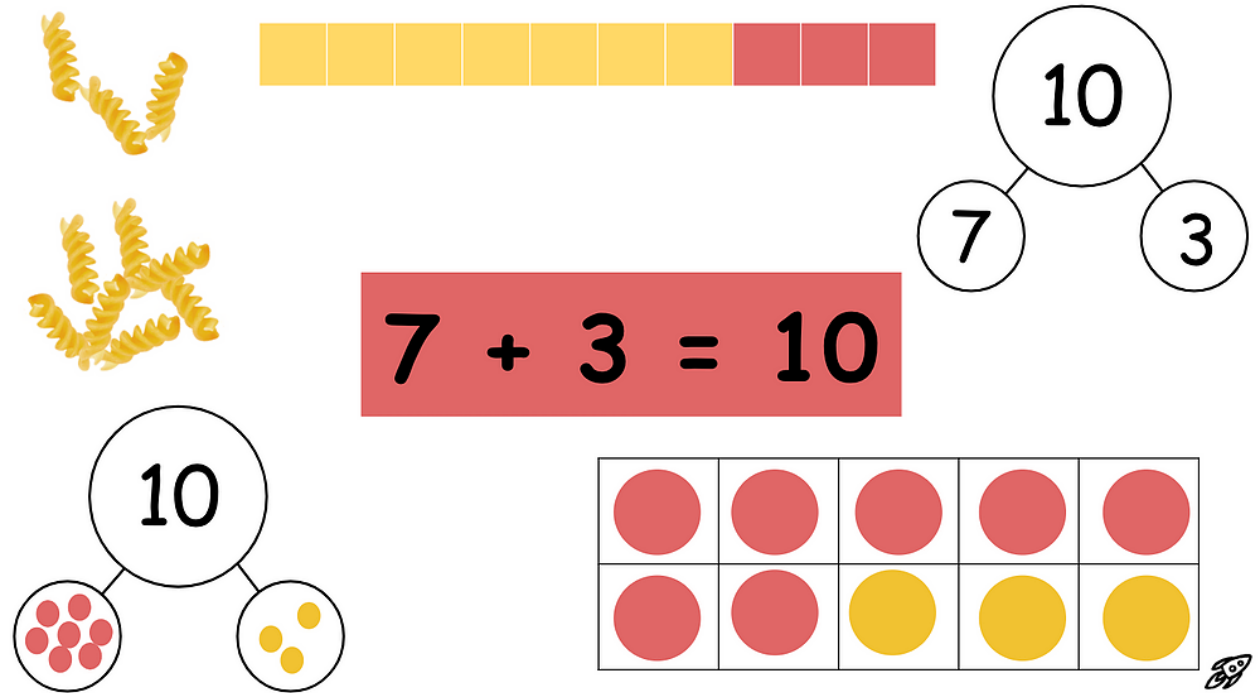
Number	Addition and subtraction	Multiplication and division	Fractions	Measurement	Geometry
count to and across 100, forwards and backwards, from any given number.	read, write and interpret statements involving +, − =	Solve one – step problem involving multiplication	Recognise, find and name $\frac{1}{2}$ of a shape, quantity and object.	Compare and solve problems involving measures.	Recognise and name common 2D shapes.
count, read and write numbers to 100.	represent and use number bonds 20.	Solve one – step problem involving division	Recognise, find and name $\frac{1}{4}$ of a shape, quantity and object.	Measure and begin to record lengths and heights.	Recognise and name common 3D shapes.
count in multiples of twos, fives and tens.	Show and use subtraction facts to 20.	Show multiplication using arrays	Solve simple $\frac{1}{2}$ and $\frac{1}{4}$ problems.	Measure and begin to record mass/weight.	Describe the position, direction and movement of objects.
Identify one more and one less of a given number.	add and subtract one-digit and two-digit numbers to 20.	Count in twos, fives and tens.		Measure and begin to record time.	
read and write numbers from 1 to 20 in digits and words.	solve one-step problems that involve subtraction.			Tell the time to the hour and half past.	
	solve one-step problems that involve addition			Recognise and know the value of different coins and notes.	
				Recognise and use language relating to dates.	

End of Year One Expectations:

Year 2 Maths			
Year 2 Number and Place Value			
Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions
Sufficient evidence shows the ability to: - Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. - Recognise the place value of each digit in a two-digit number (tens, ones). - Identify, represent and estimate numbers using different representations, including the number line. - Compare and order numbers from 0 up to 100; use <, > and = signs. - Read and write numbers to at least 100 in numerals and in words. - Use place value and number facts to solve problems.	Sufficient evidence shows the ability to: - Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods. - Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. - Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers. - Add three one-digit numbers. - Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. - Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	Sufficient evidence shows the ability to: - Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. - Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. - Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. - Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	Sufficient evidence shows the ability to: - Recognise, find, name and write fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$ of a length, shape, set of objects or quantity. - Write simple fractions for example, $\frac{1}{2}$ of $6 = 3$ and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.
Year 2 Geometry and Measures			
Measures	Geometry – Properties of Shapes	Geometry – Position and Movement	Statistics
Sufficient evidence shows the ability to: - Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. - Compare and order lengths, mass, volume/capacity and record the results using >, < and =. - Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value - Find different combinations of coins that equal the same amounts of money. - Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. - Compare and sequence intervals of time. - Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. - Know the number of minutes in an hour and the number of hours in a day.	Sufficient evidence shows the ability to: - Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. - Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. - Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]. - Compare and sort common 2-D and 3-D shapes and everyday objects.	Sufficient evidence shows the ability to: - Order and arrange combinations of mathematical objects in patterns and sequences. - Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise).	Sufficient evidence shows the ability to: - Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. - Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. - Ask and answer questions about totalling and comparing categorical data.

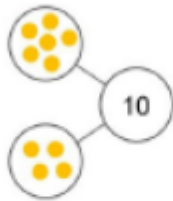
End of Year Two Expectations:

Same concept in different ways:



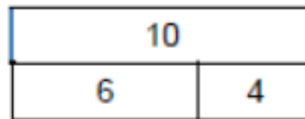
$$\begin{aligned} 6 + 4 &= 10 \\ 4 + 6 &= 10 \\ 10 - 4 &= 6 \\ 10 - 6 &= 4 \end{aligned}$$

Tens Frame



$$\begin{aligned} 6 + 4 &= 10 \\ 4 + 6 &= 10 \\ 10 - 4 &= 6 \\ 10 - 6 &= 4 \end{aligned}$$

Part Whole Model



$$\begin{aligned} 6 + 4 &= 10 \\ 4 + 6 &= 10 \\ 10 - 4 &= 6 \\ 10 - 6 &= 4 \end{aligned}$$

Bar Model

What else do we teach in Maths?

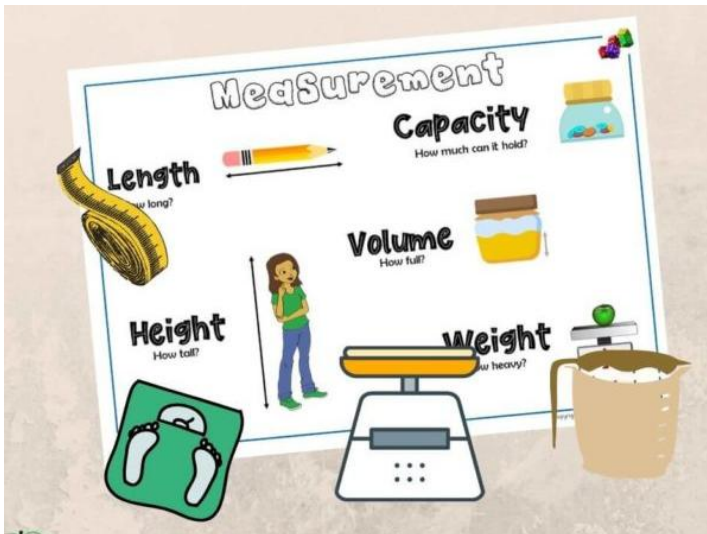
Measurement



We discuss capacity, mass/weight and length/height.

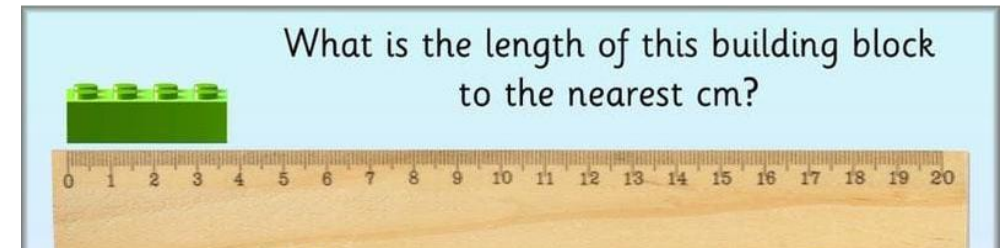
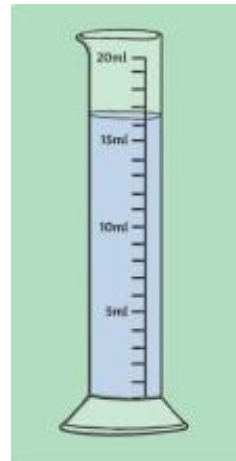
We describe and solve practical problems and explore intervals in cm, m, ml, g and kg by using weighing scales, rulers and containers.

We sequence events in chronological order and use language relating to dates (days, months, years).



Days of the Week

Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday

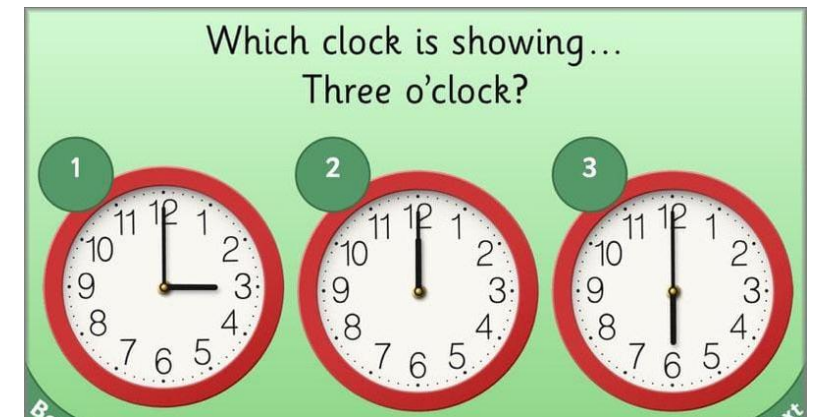
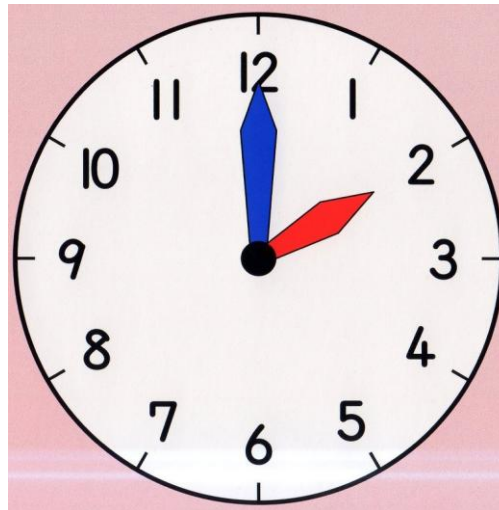


What is the length of this building block to the nearest cm?

What else do we teach in Maths?

Time

We look at the names of the 'hands' and how they move. We discuss o'clock and half past the hour. In year 2 we look at telling the time using $\frac{1}{4}$ past and $\frac{1}{4}$ to the hour as well as 5 minute intervals.

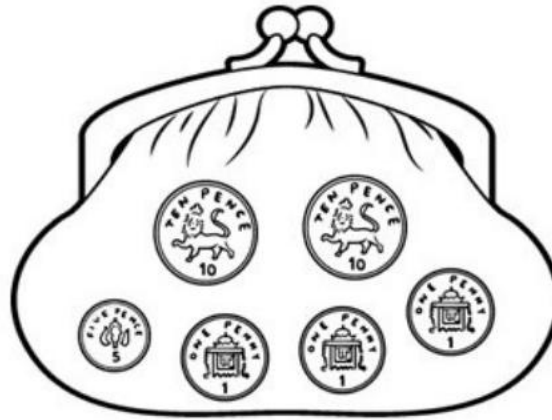


What else do we teach in Maths?

Money

We look at the names of coins and notes. We recognise coins and notes and what the value is of each coin. We discuss how some coins are worth the same as another coin (eg. $1p + 1p = 2p$). We add up coins to find the total and in Year 2 we look at making change when we need to 'buy' something.

British Money



What else do we teach in Maths?

Fractions

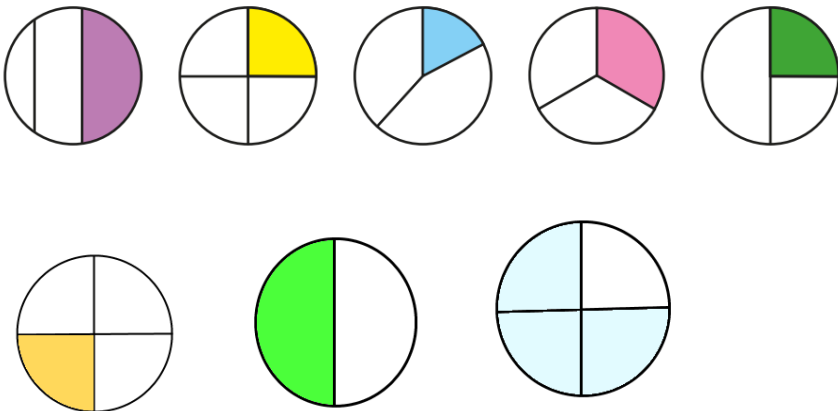
We recognise, find and name a half, as one of two equal parts.

We recognise, find and name a quarter as one of four equal parts.

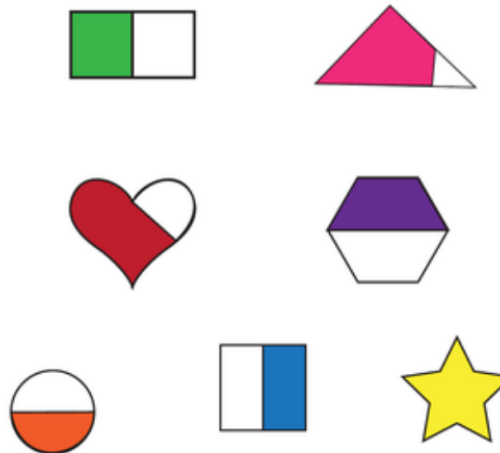
We can recognise half of a quantity, half of a length or half of a shape.

We recognise and write $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{4}$ and write simple fraction equations eg. $\frac{1}{2}$ of 6 = 3.

Which circle shows a third?



Circle the shapes that have $\frac{1}{2}$ colored in.



What fraction of the pizza is covered in... bacon?



$$\frac{1}{2} \quad \frac{1}{4} \quad \frac{3}{4}$$

Tom shows $\frac{1}{2}$ of his whole ribbon.



Sam shows $\frac{1}{4}$ of her whole ribbon.



Ben shows $\frac{1}{3}$ of his whole ribbon.



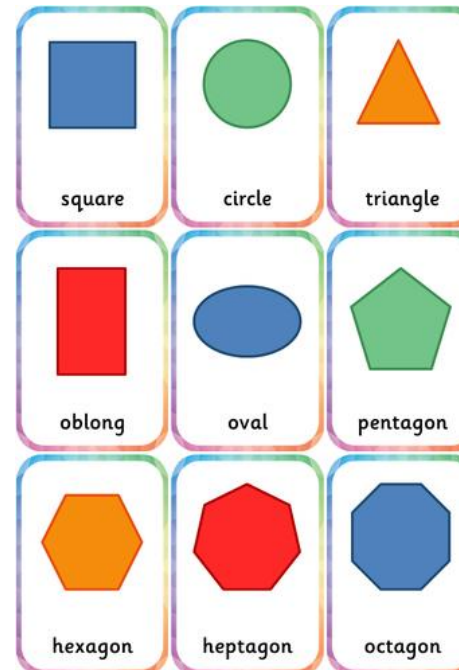
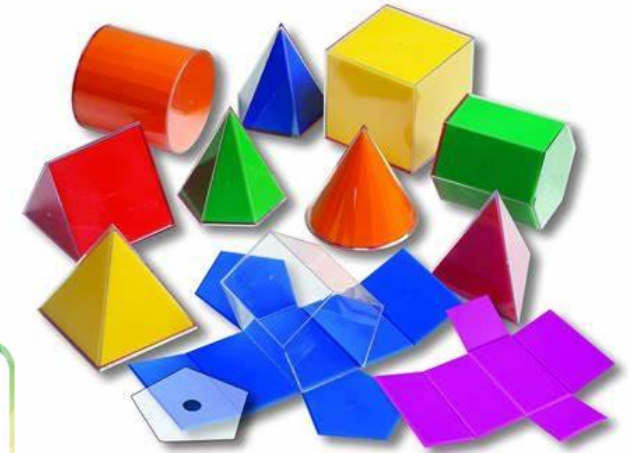
Whose whole piece of ribbon is the longest?

What else do we teach in Maths?

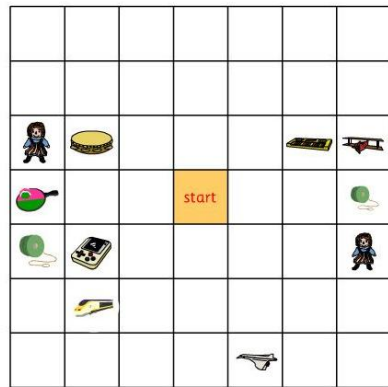
Shape & Position and Direction

We identify the properties of 2D and 3D shapes – sides, corners, edges, faces.
We identify the 2D shapes within 3D shapes.
We compare and sort common shapes.

We order and arrange objects in patterns and sequences.
We use mathematical language to describe position and directions.
We describe turns by applying rotations.



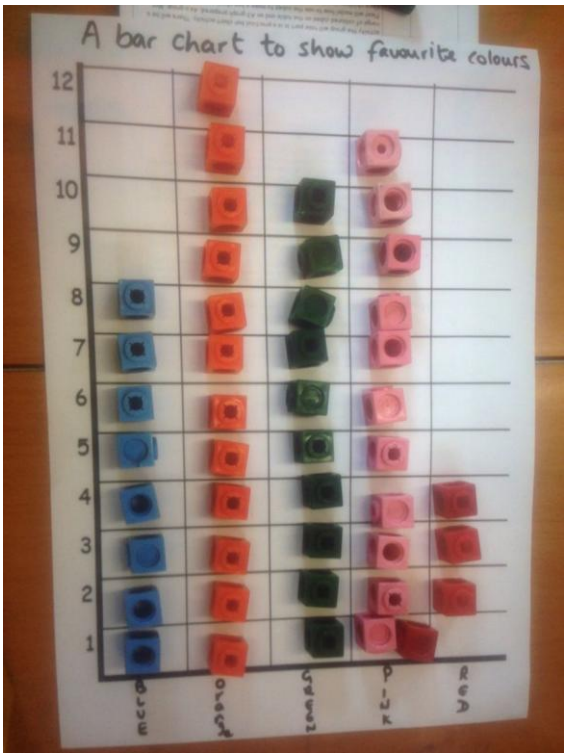
From start move two squares down then two to the left. Circle the toy you land on.



What else do we teach in Maths?

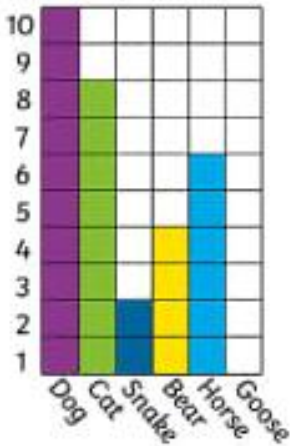
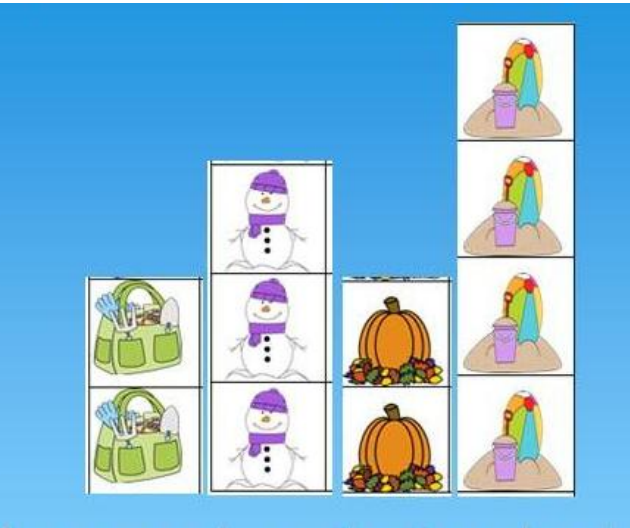
Statistics (Year 2)

We interpret simple pictograms, tally charts and block diagrams. We ask and answer simple questions about these. We collage and compare information with simple ratios (2, 5, 10)



Favourite Lessons

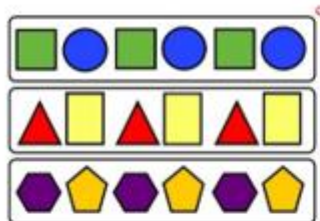
Subject	Tally	Total
Maths		4
English		3
Science		2
History		9
Other		6





What can you do at home?

Create a pattern using a variety of shapes and numbers.



Use play-doh to create as many numbers as you can.



Find as many different examples of numbers and shapes around your house.



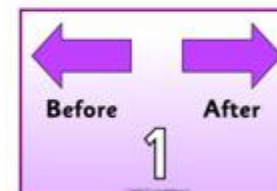
How many people are in your house? How many hands? How many eyes? Etc.



Collect loose items from your garden or house. Count and sort them.



Practise counting forwards and backwards. Also say the number before and the number after.



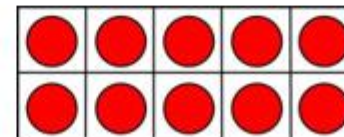
Measure different items in your house using your hands. E.g. how many hands long is your table?



Draw/paint a picture which has shapes and numbers in it.



Practise your number bonds to 10. Use objects to help you.



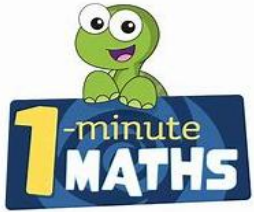
Play snap with number cards.





Ideas to support your child at home:

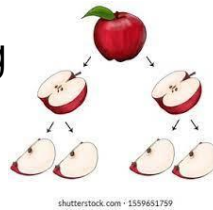
Counting opportunities to secure 1:1 correspondence.



Subitising when playing games with a dice or anywhere at home.



Exploring fractions when cutting pizza, cake, fruit.



Practise exploring coins and working out the change.

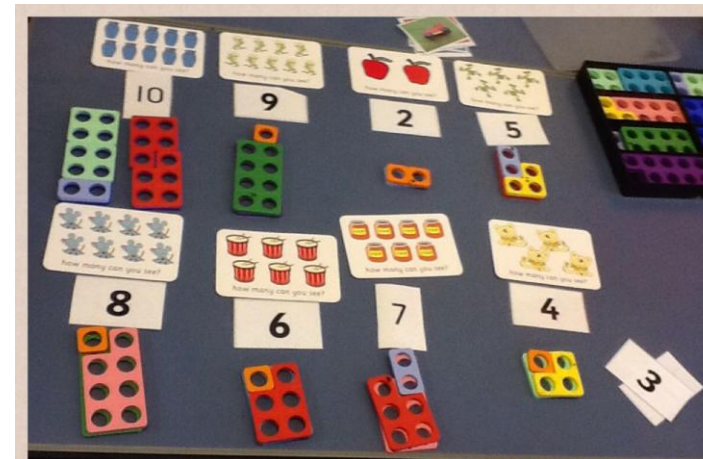
Finding number patterns.



Telling the time on an analogue clock.

Opportunities to weigh and measure when cooking!





Thank you for your time.

We hope you found this presentation helpful.