

A decorative border surrounds the central text, featuring various mathematical symbols and objects such as a pencil, a ruler, a calculator, a lightbulb, a cone, a cylinder, a globe, a book, a pencil, a number '3', a checkmark, a sine wave, a laptop, a lightbulb, and a green arrow.

# *Welcome to our Maths Workshop*

*FS1/FS2*

Workshop aims: -

- What does maths look like in FS1 and FS2?
- What are the key principles of maths in the Early Years?
- How can children be supported?

## At Birley Primary Academy, our shared vision for mathematics is:

- To foster a sense of curiosity and excitement about the subject
- For every child to develop their mathematical fluency and to be able to reason and problem solve confidently.
- To provide a context for learning to ensure children develop an understanding of how mathematics is used in the wider world
- To provide a mathematics curriculum where children continually build on the knowledge they have already mastered and are able to make rich connections across mathematical ideas
- To enable children to confidently reason about their mathematics by promoting the use of accurate mathematical language
- To secure children's knowledge and accuracy when recalling number facts
- To develop children's mathematical thinking by using a range of models to support learning e.g. concrete manipulatives and pictorial representations, before moving onto abstract symbols
- To promote enjoyment of learning through practical activity, exploration and discussion
- To build resilience and promote a positive growth mind set in mathematics

The level of progress children should be expected to have attained by the end of the Foundation Stage 2 year is defined by the early learning goals.

The Maths ELGs that children are assessed against at the end of their reception year are:

#### Number ELG

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 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.

The link below will take you to the Department for Education's Early Years Foundation Stage Profile document if you would like to find out more about the Early Learning Goals for the foundation stage.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1109972/Early Years Foundation Stage profile 2023 handbook.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1109972/Early_Years_Foundation_Stage_profile_2023_handbook.pdf)

Comparison 1

**More than,  
fewer than,  
same**

[VIEW](#)

Shape, space  
and measure 1

**Explore and  
build with  
shapes and  
objects**

[VIEW](#)

Pattern 1

**Explore  
repeats**

[VIEW](#)

Counting 1

**Hear and  
say number  
names**

[VIEW](#)

Counting 2

**Begin to  
order  
number  
names**

[VIEW](#)

Subitising 1

**I see 1, 2, 3**

[VIEW](#)

Pattern 2

**Join in with  
repeats**

[VIEW](#)

Shape, space  
and measure 2

**Explore  
position and  
space**

[VIEW](#)

Subitising 2

**Show me 1,  
2, 3**

[VIEW](#)

Counting 3

**Move and  
label 1, 2, 3**

[VIEW](#)

Shape, space  
and measure 3

**Explore  
position and  
routes**

[VIEW](#)

Pattern 3

**Explore  
patterns**

[VIEW](#)

# FS1 Yearly overview

Counting 4

**Take and  
give 1, 2, 3**

[VIEW](#)

Shape, space  
and measure 4

**Match, talk,  
push and  
pull**

[VIEW](#)

Subitising 3

**Talk about  
dots**

[VIEW](#)

Comparison 2

**Compare  
and sort  
collections**

[VIEW](#)

Pattern 4

**Lead on  
own repeats**

[VIEW](#)

Shape, space  
and measure 5

**Start to  
puzzle**

[VIEW](#)

Pattern 5

**Making  
patterns  
together**

[VIEW](#)

Subitising 4

**Make games  
and actions**

[VIEW](#)

Counting 5

**Show me 5**

[VIEW](#)

Pattern 6

**My own  
pattern**

[VIEW](#)

Counting 6

**Stop at 1, 2,  
3, 4, 5**

[VIEW](#)

Comparison 3

**Match, sort,  
compare**

[VIEW](#)

Week 1 Week 2 Week 3 Week 4 Week 5 Week 6 Week 7 Week 8 Week 9 Week 10 Week 11 Week 12

Autumn term

Getting to know you

[VIEW](#)

Free trial

Match, sort and compare

[VIEW](#)

Talk about measure and patterns

[VIEW](#)

It's me 1, 2, 3

[VIEW](#)

Circles and tria...

[VIEW](#)

1, 2, 3, 4, 5

[VIEW](#)

Shapes with 4...

[VIEW](#)

# FS2 Yearly overview

Spring term

Alive in 5

[VIEW](#)

Mass and capa...

[VIEW](#)

Growing 6, 7, 8

[VIEW](#)

Length, height and time

[VIEW](#)

Building 9 and 10

[VIEW](#)

Explore 3-D shapes

[VIEW](#)

Summer term

To 20 and beyond

[VIEW](#)

How many now?

[VIEW](#)

Manipulate, compose and decompose

[VIEW](#)

Sharing and grouping

[VIEW](#)

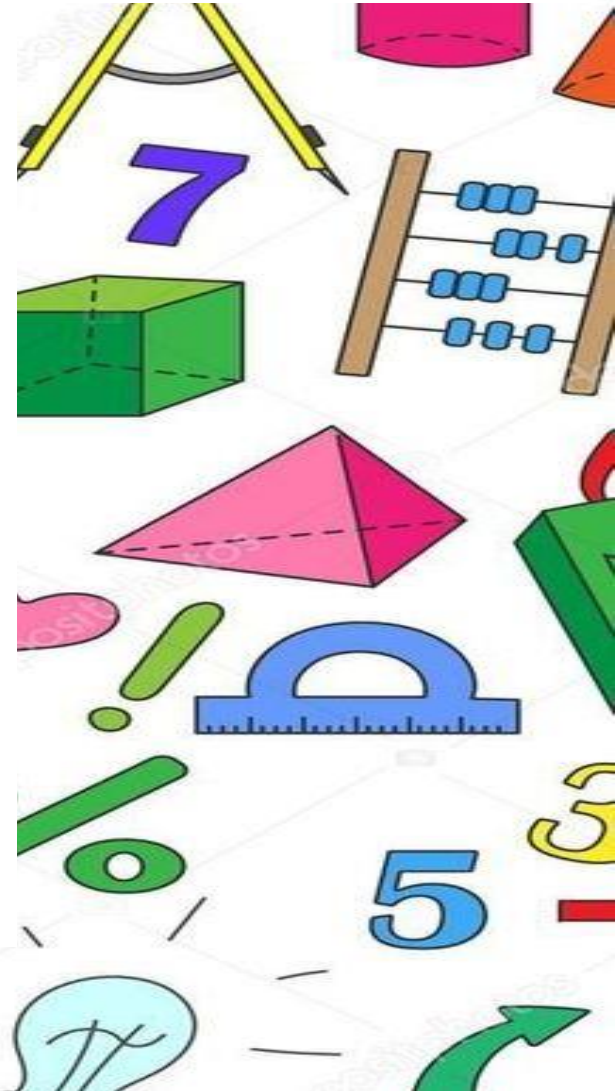
Visualise, build and map

[VIEW](#)

Make connecti...

[VIEW](#)

Consolidation



# What does Maths look like in FS1/FS2?

- Learning through play.
- Outdoor activities.
- Counting, counting and more counting!
- Singing number songs
- Pattern spotting, copying and creating repeating patterns
- Number recognition and ordering to 5 (FS1) and to 10 (FS2).
- Learning number bonds for all numbers up to and including 10 (FS2).
- Shape recognition, 2D (circle, square, rectangle, triangle) and 3D (cone, pyramid, cylinder, cube, cuboid).
- Addition and subtraction using single digit numbers (FS2).
- Measuring, making comparisons, sorting and identifying.



Sorting into criteria. This could be colours, amounts, personal characteristics (boy/girl).. The list goes on!



Enjoying counting as far as they can go and using number names in play

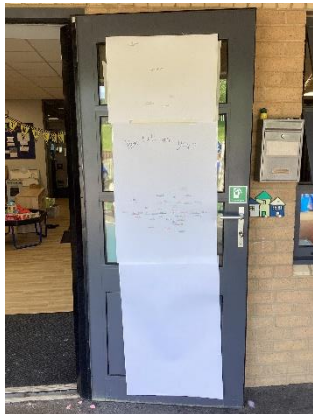
Creating repeating patterns



Building with different equipment, different sizes and different shapes



Experimenting with measure. This could be in the sand, the water, balancing scales and more



Number stamps, how many candles on your cup cake, lots of questions about 'How many..?'



# Number

FS1



Summary	Points in sequence to a number of objects.	Starts to use some number names and starts to ascribe names to objects in a rhythmical way.	Can identify 1 and 2 objects when asked.	Subitises and count to 3.	Counts up to five starting to understand cardinal principle.	Uses number in play. Can identify numerals to 5.
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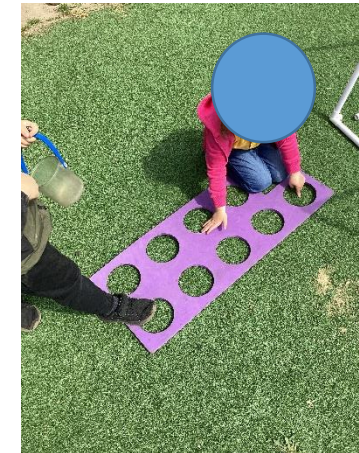
## Numerical patterns

Summary	Counts rhythmically and can count in songs and rhymes.	Starts to use number comparison language.	Enjoys counting as far as they can and uses numbers in their play.	Can say what number comes next when counting and singing number songs.	Can use "more than" to identify different groups.	Can identify when two groups have the same number.
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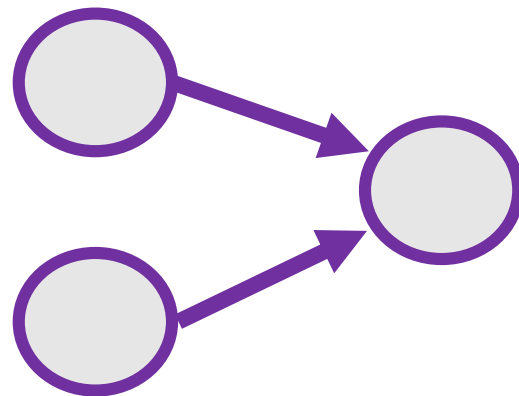
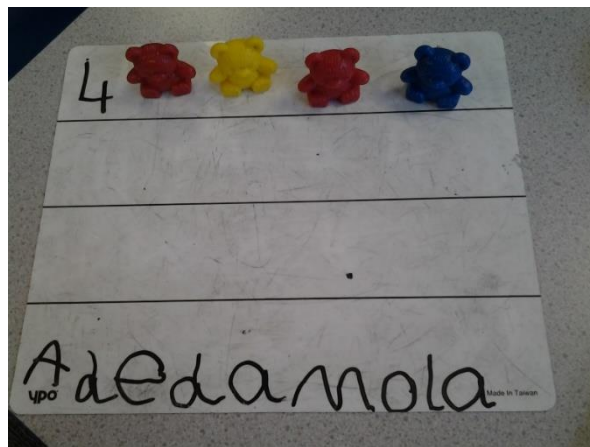
## Shape, space and measure

Summary	Can build using different equipment of different sizes and shapes.	Can talk about their models and what they used to build their models, identifying different bricks and colours, for example.	Can sort using simple criteria.	Starts to identify simple patterns.	Can make simple comparisons.	Starts to use simple shape names.
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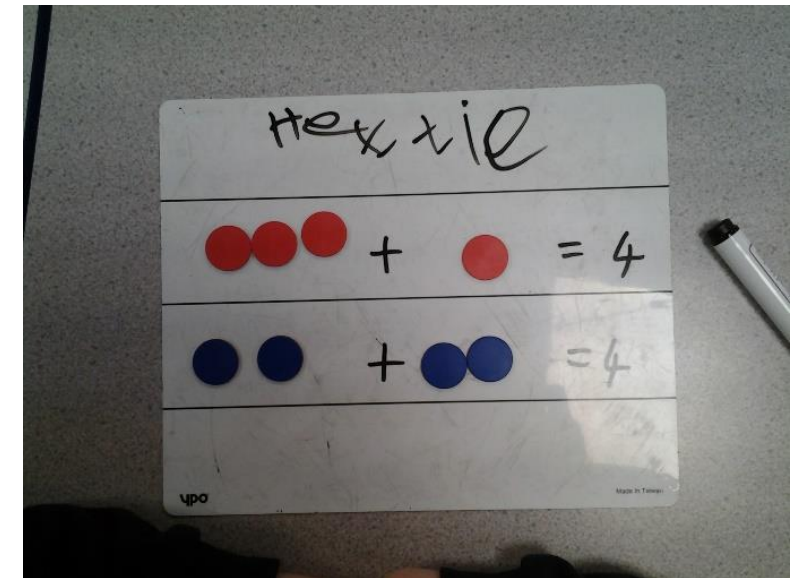
# Concrete, Pictorial, Abstract

The concrete, pictorial, abstract approach (or CPA method) is a process of using “concrete” equipment to represent numbers (including fractions) and operations, such as addition, subtraction, division and multiplication, followed by a pictorial representation to represent the equipment or derived structures (like bar and part-whole models), before moving on to the “abstract” digits and various other symbols used in mathematics.



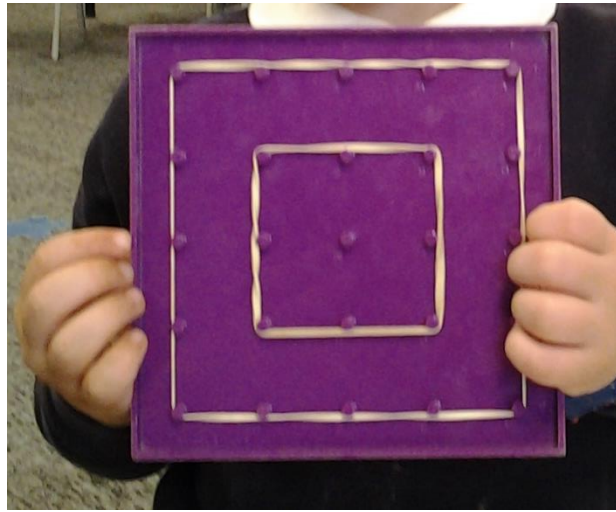
$$34 + 66 =$$

We use concrete resources in FS1 and FS2.

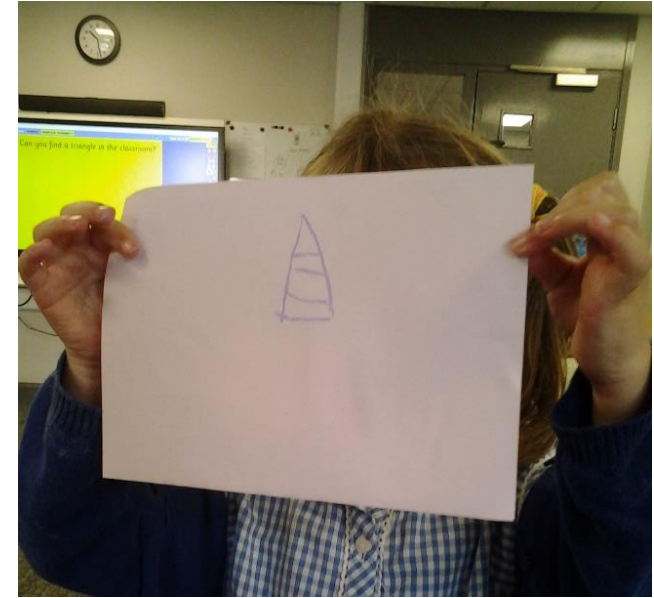


We use the outdoors to support maths learning by finding objects and counting them. We find one more or less than the objects we have collected. We find things that are taller and shorter than ourselves.

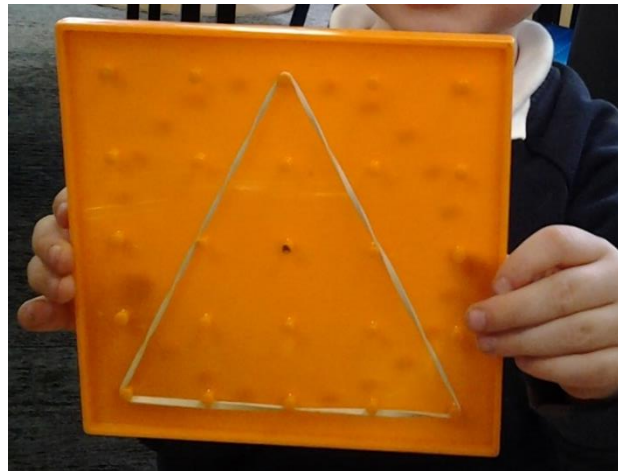
# Making and finding shapes



Using geo-boards to make shapes.



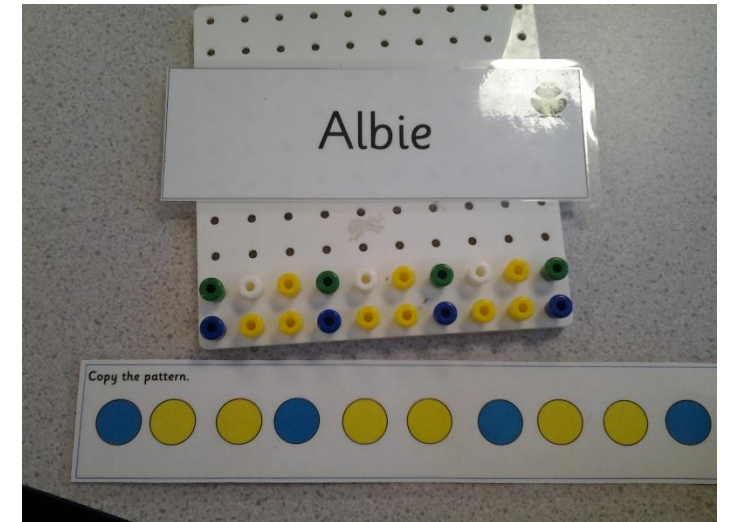
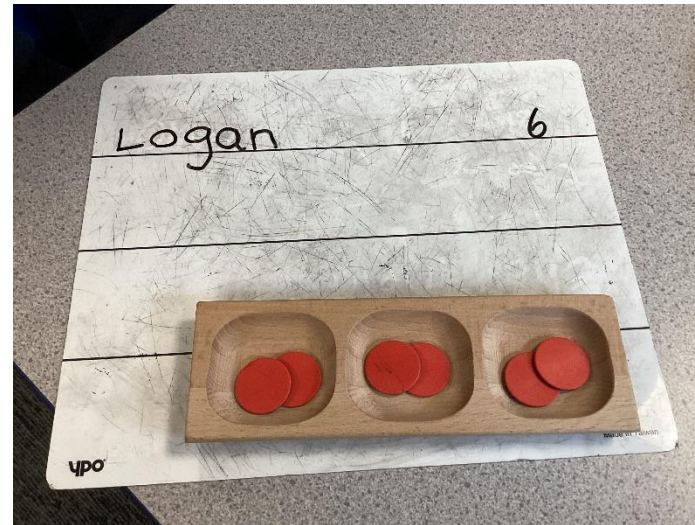
Drawing shapes.



Finding shapes in the environment.



Each room has a Maths Area for independent learning.



Ordering pumpkins by size.  
Sharing 6 counters between 3.  
Making and copying repeating patterns.  
Matching numerals to make the total 10.

# Mastering Number



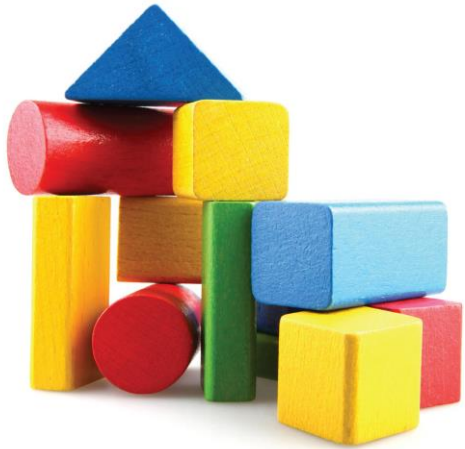
This project aims to secure firm foundations in the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number. Attention will be given to key knowledge and understanding needed in Reception classes, and progression through KS1 to support success in the future.

Mastering number sessions last around 15 minutes and are in addition to the regular maths lesson. During these sessions, children will sometimes use a rekenrek (you may know this as an abacus) to support their learning.

If you would like to know more about the Mastering Number Programme, please follow the link below.

<https://www.ncetm.org.uk/maths-hubs-projects/mastering-number-at-reception-and-ks1/>

# Examples of maths resources used in FS1 and FS2...





# Resources you can use at home...

Counters



3D shapes



Counting bears



Or you could use ⇒

Smarties



Food packaging



Or you could use ⇒

Anything you have a lot of!

Or you could use ⇒



# Resources you can use at home...



Pasta shapes for counting



Toys to put in size order



Playing cards for number recognition



Money for counting or creating your own money problems

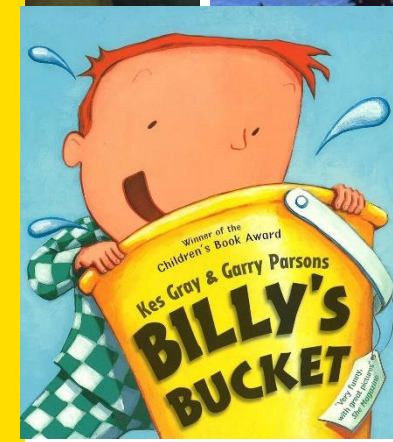
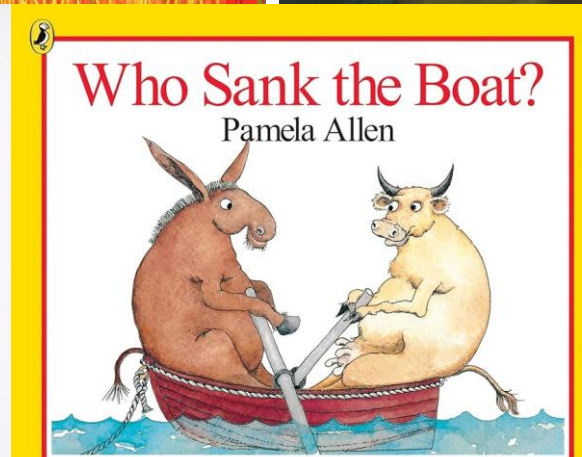
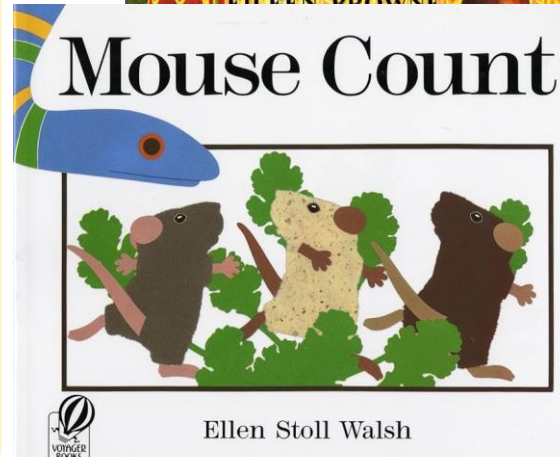
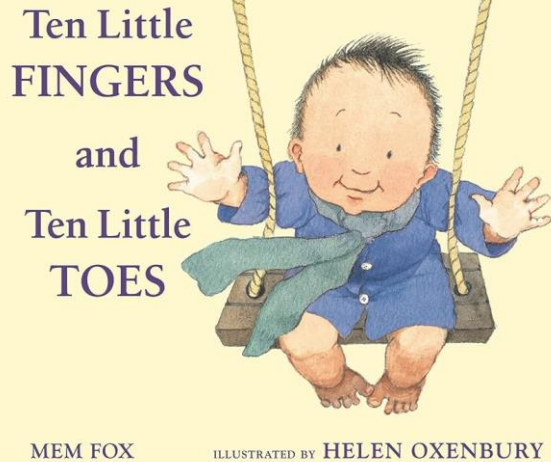
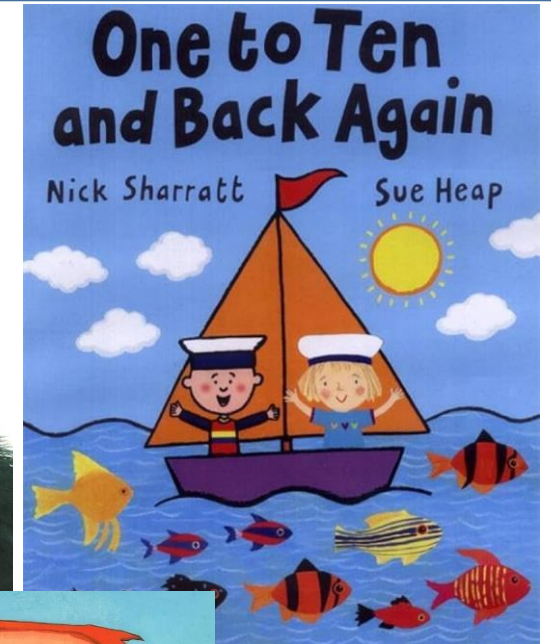
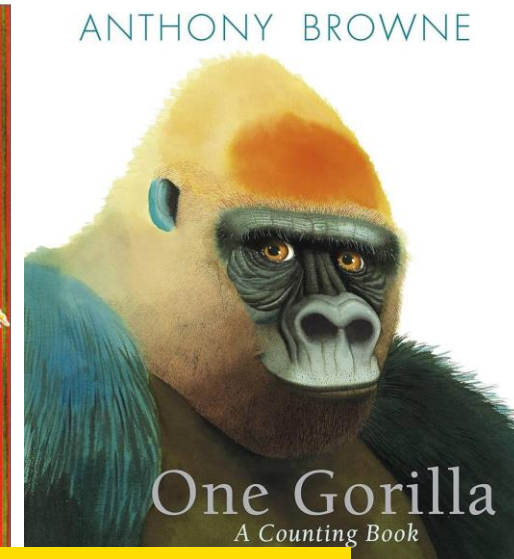
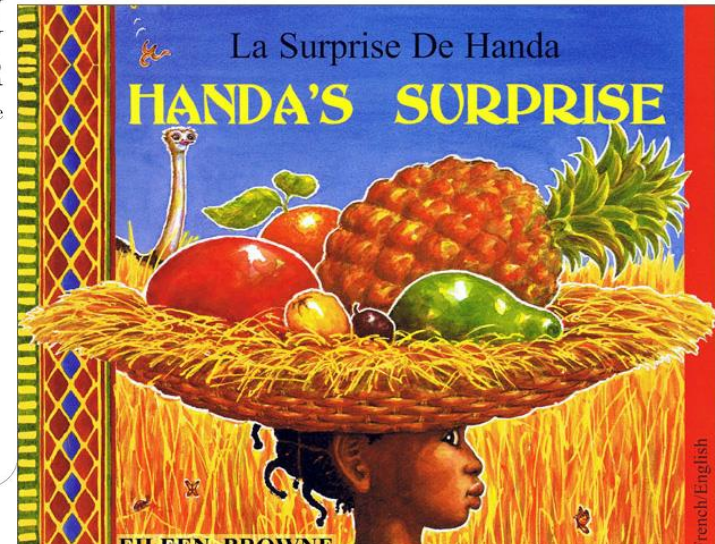
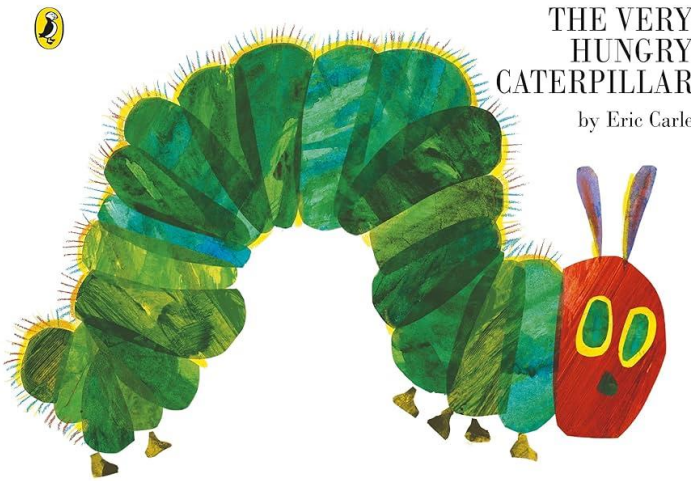
# Recognising that numbers are all around us...



# How can you support your child at home?

- Reassure and praise whenever possible.
- Break a problem down into more manageable parts.
- Use maths in everyday routines at home and involve children in this process e.g. portioning meals, cutting vegetables into halves, quarters etc.
- Encourage games that use shapes and numbers
- Recognise the importance of maths in everyday life e.g. telling the time and managing money

Books can be a great way to explore different aspects of number. Below are few recommended books (as recommended by NRICH). <https://nrich.maths.org/14111>



# Ideas for everyday maths opportunities...

Count - steps up the stairs, money into a money box etc.

Ask children to say how many without counting (5 or fewer)

Play games using dice/dominoes and encourage child to say how many spots without counting.

Hide numbers around the house or garden for children to find.

Read books with maths concepts eg *The Very Hungry Caterpillar*, *One is a snail, ten is a crab*, *What's the time, Mr Wolf?* *The doorbell rang*.

Ask children to set the table with enough knives, forks and plates for everyone.

Spot numbers in the environment - on phones, microwaves, clocks, registration plates, doors.

Watch *Numberblocks* on Cbeebies. This programme is written by maths specialists to model maths concepts and represents number brilliantly.

# Websites to Support Children's Maths Learning at Home:

Cbeebies - <https://www.bbc.co.uk/cbeebies/topics/numeracy>

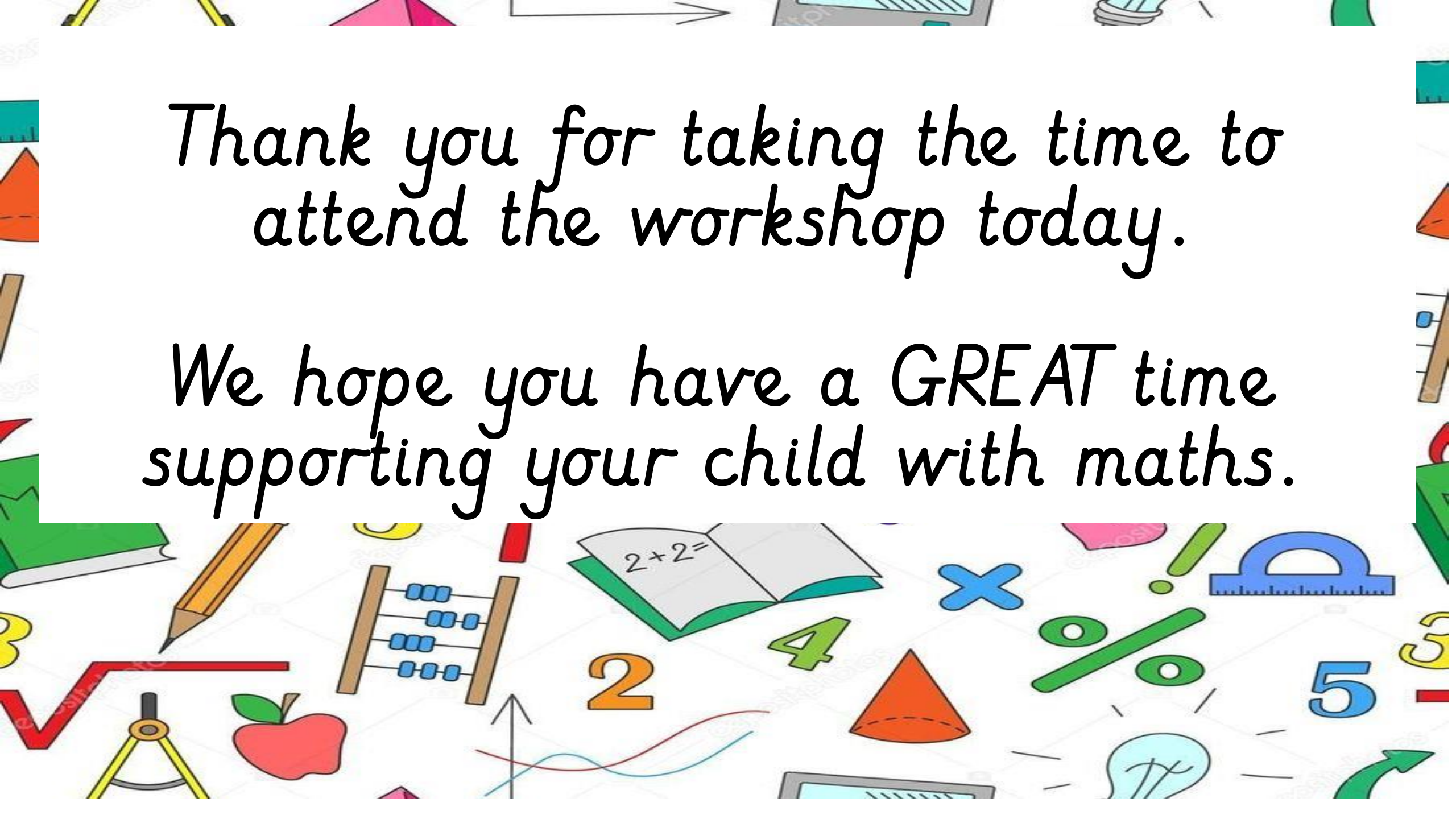
Maths Zone - <https://mathszone.co.uk/>

BBC Bitesize - <https://www.bbc.co.uk/bitesize/subjects/z826n39>

I See Maths - <https://www.iseemaths.com/games-resources/>

Hit the Button - <https://www.topmarks.co.uk/maths-games/hit-the-button>



A decorative border surrounds the text, featuring various mathematical and educational icons. At the top, there is a yellow pencil, a pink triangle, a white arrow, a grey laptop, and a lightbulb. On the left side, there is a red triangle, a green mountain-like shape, and a yellow pencil. On the right side, there is a blue ruler, a green mountain-like shape, and a yellow pencil. At the bottom, there is a yellow pencil, a red apple, a blue abacus, a blue book with the equation  $2+2=$ , a blue 'x' symbol, a green percentage sign, a blue protractor, a blue '5', a blue lightbulb, and a green arrow. In the center, there is a blue '2', a green '4', and a red cone.

*Thank you for taking the time to  
attend the workshop today.*

*We hope you have a GREAT time  
supporting your child with maths.*