Viridis Schools The Federation of Orchard Primary School Southwold Primary School Hoxton Garden Primary School

How can I develop my child's mathematical understanding at home?

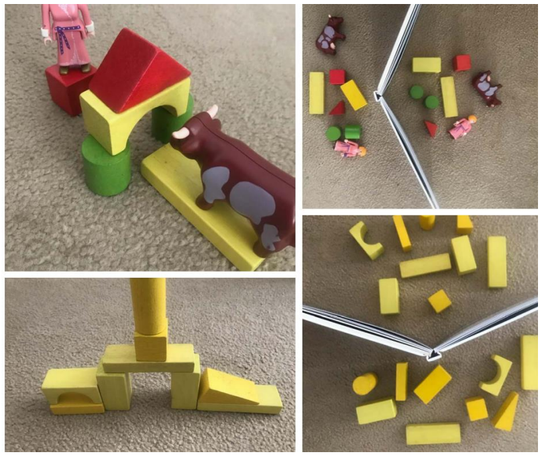
November 2023

Our Curriculum

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. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built.

In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.

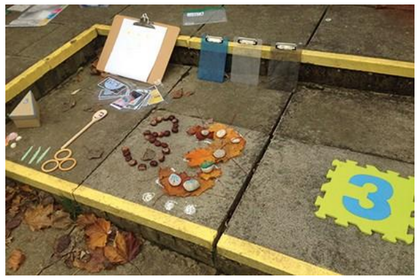
It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.



By the end of Nursery…

Number

Say one number name for each item in order: 1, 2, 3, 4, 5
Show 'finger numbers' up to 5
Develop fast recognition of up to 3 objects, without having to count them individually ('subitising').
Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').
Link numerals and amounts
Experiment with their own symbols and marks as well as numerals
Recite numbers past 5.
Solve real world mathematical problems with numbers up to 5



Measure, geometry and spatial thinking

Compare quantities using language: 'more than', 'fewer than'
Talk about and explore 2D and 3D shapes using informal and mathematical language
Understand position through words alone with no pointing
Describe a familiar route. Discuss routes and locations.
Make comparisons between objects relating to size, length, weight and capacity.
Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. Combine shapes to make new ones – an arch, a bigger triangle, etc.
Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper.
Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern.
Begin to describe a sequence of events, real or fictional

By the end of Reception…

Number

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

Measure, geometry and spatial thinking

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

Characteristics of Effective Teaching and Learning

Finding out and exploring

Playing with what they know

Willing to 'have a go'

What if we try…?

Playing and Exploring
Engagement

This looks tricky, let's give it a go!

Playing with their own ideas

Children given the time and space to play with concepts

Developing the skill to become engaged and absorbed

Building confidence as mathematicians

Characteristics of Effective Teaching and Learning

Being involved and concentrating

Keeping trying

Enjoying achieving what they set out to do

Did that turn out as expected?

Active Learning
Motivation

That was tricky, well done for carrying on.

Opportunities to develop resilience

Children are able to remain focused despite setbacks

Building confidence as mathematicians

Be able to set a goal and work towards it

Characteristics of Effective Teaching and Learning

Having their own ideas

Making links

Choosing ways to do things

Is there a better way to…?

Creating and thinking critically
Thinking

What might you try next?

Developing mathematical reasoning

Visualise, predict, review and evaluate.

Building confidence as mathematicians

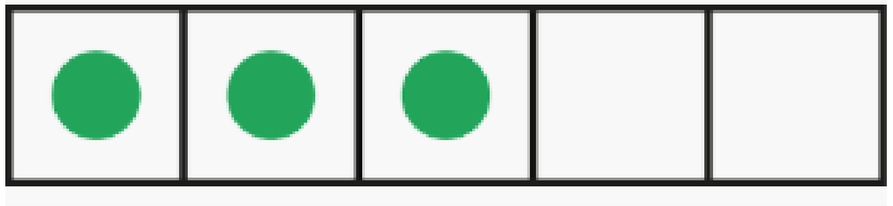
How can you help?

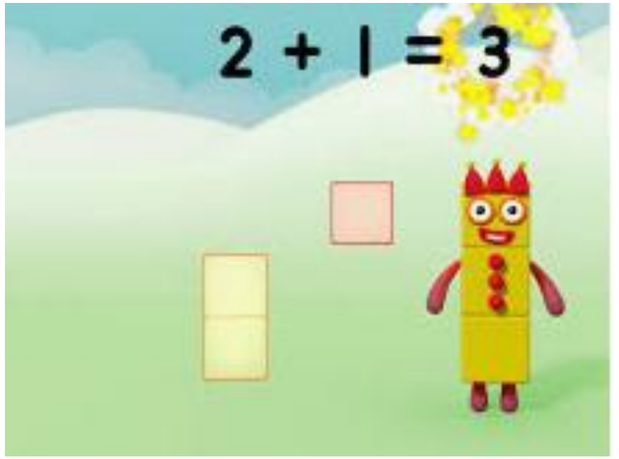
Number and shape in the environment

〇一二三
四五六七
八九十

How can you help?

Understanding number





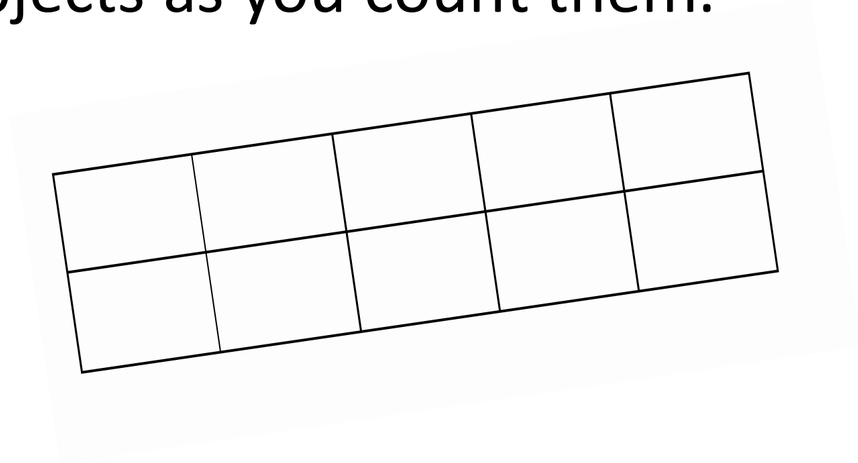
How can you help?

Matching numeral to quantity

How can you help?

Counting skills - How can you support your child to develop their 1 to 1 correspondence?

- Encourage children to point with their finger.
- Support children to place the objects in a line so they are easier to count.
- Place the objects in a ‘tens frame’, egg cartons or arrange them in rows.
- Move the objects as you count them.



How many apples will we buy?

How can I develop mathematical thinking?
Play games!

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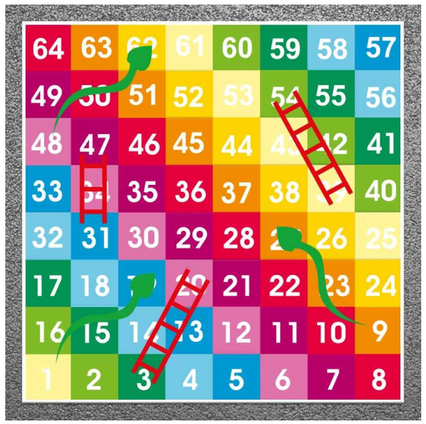
Fill the frame!

- A five or ten frame
- Counters/items to place on
- Dice/spinner

Sets of 'real life' objects that can be counted, sorted, ordered. Containers such as egg boxes, baking tins, ice cube trays can be used at home.

1) Start with an empty number frame
2) Roll the dice and put the number of items on the frame. Take it in turns.
3) The winner is the person to fill their frame first.



How can you develop a positive attitude to maths by making it fun!

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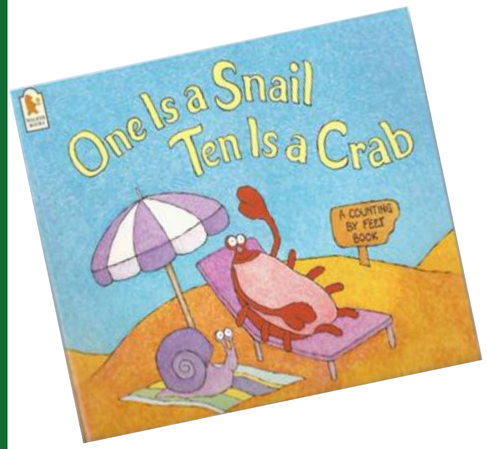
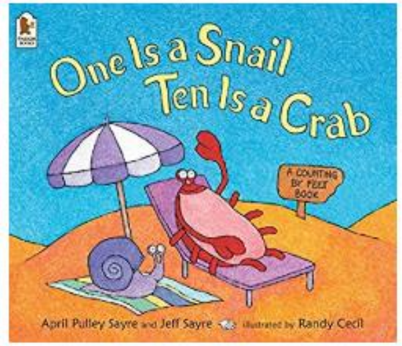
- Count the steps you go up or down
- Look at the house numbers or bus numbers while in the street
- Set the table for dinner – how many cups, spoons etc. do you need?
- Match pairs of socks, make sock patterns
- Look at how tall the flowers / trees grow

Let your child help to bake/cook.
What size pan do we need?
What shape is a cake?
Can you weigh the ingredients?
Can you fill in half of a jug with milk?

Exploring maths through stories





Use books as starting points in maths