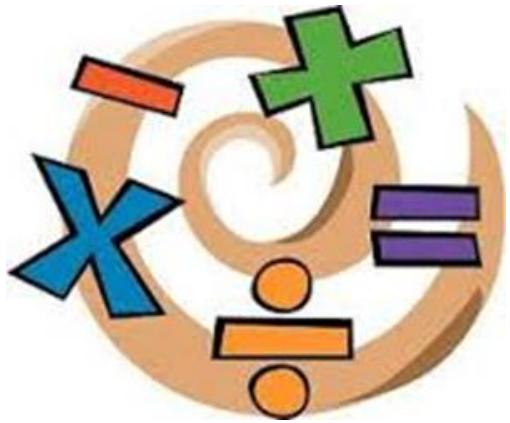
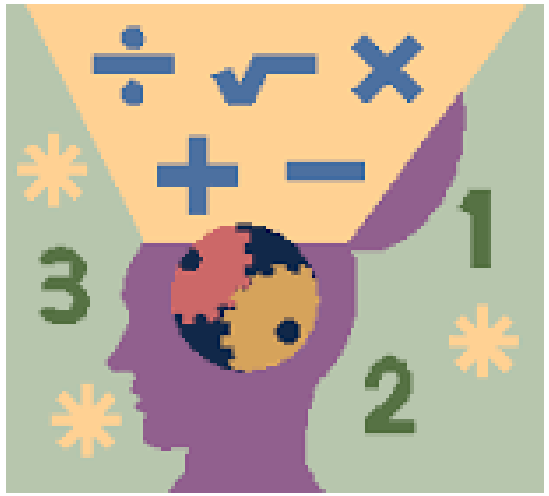
Maths Mastery Parents' Session



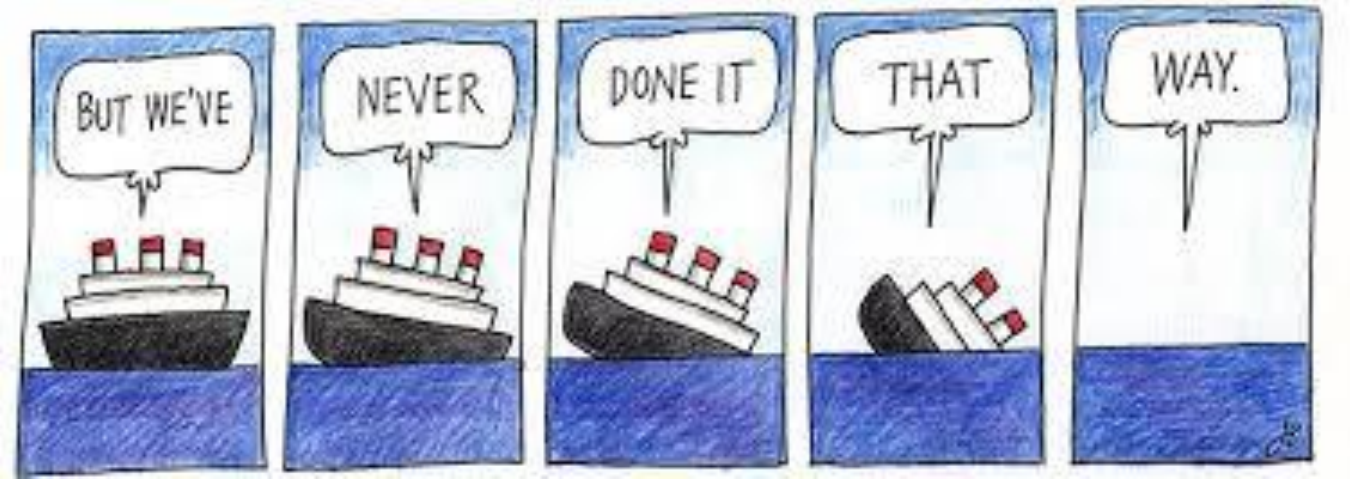
Aims of this session:

- To gain an insight into maths
- To understand the mastery approach and how it is taught.
- To give ideas for supporting maths at home – making it fun!



How and Why did the Mathematics Mastery Approach Develop:

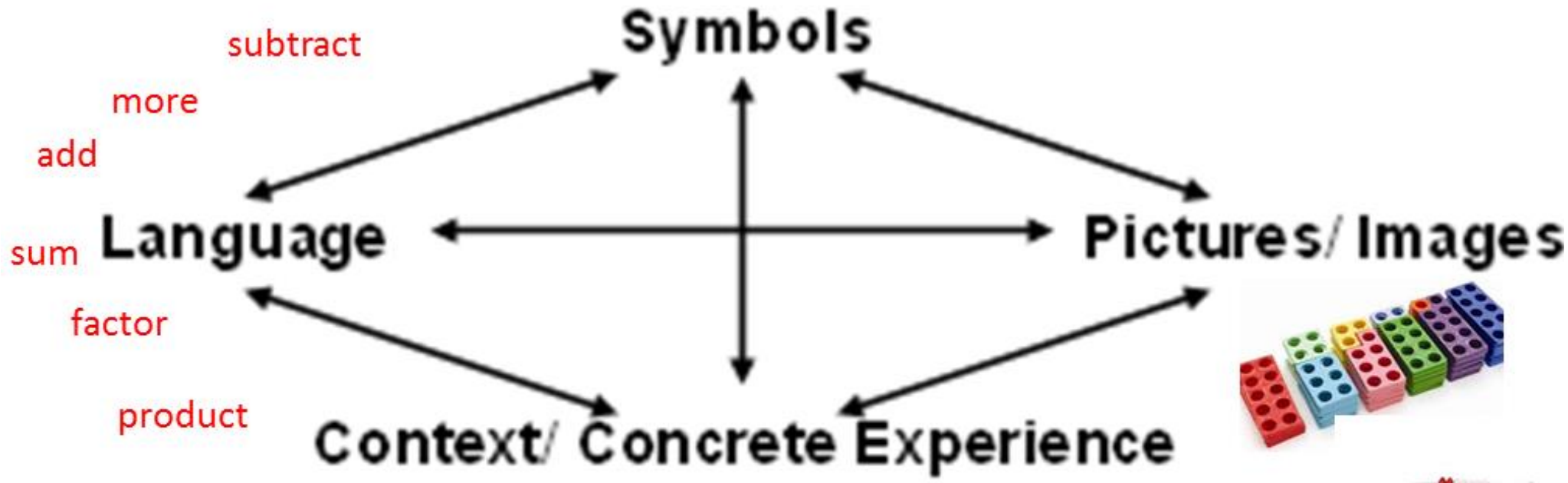
- Too many children are falling behind
- Not enough children are excelling
- Teaching has been focused on procedures over understanding
- Negative attitudes towards maths ability and enjoyment



The Mathematics Mastery Approach

- Depth before breath – a rigorous and systematic programme that is developed to ensure every child can achieve excellence.
- It provides a deep understanding of the subject through a Concrete, Pictorial and Abstract approach.
- Mastery – when a concept or skill can be applied over time in a multiple of ways and to an unfamiliar setting

= + x %



Here is a receipt for some shopping. How much did I spend? How much change did I get from £20?

A Maths Mastery Curriculum

- High expectations for every child
- Few topics, greater depth
- Number sense and place value come first
- A research based curriculum
- The use of objects and pictures before number and letters
- Problem solving is central
- Language and Communication lead to understanding
- Challenge is provided through an increased depth, rather than acceleration of content

Transitions

- Wherever you are, whatever you are doing, you can be practising maths!
- Days, time, months, represented by numbers
- Counting – forwards and backwards
- shape
- money
- Measure – weight, length and capacity
- Positional language
- ordinal numbers
- Problem solving

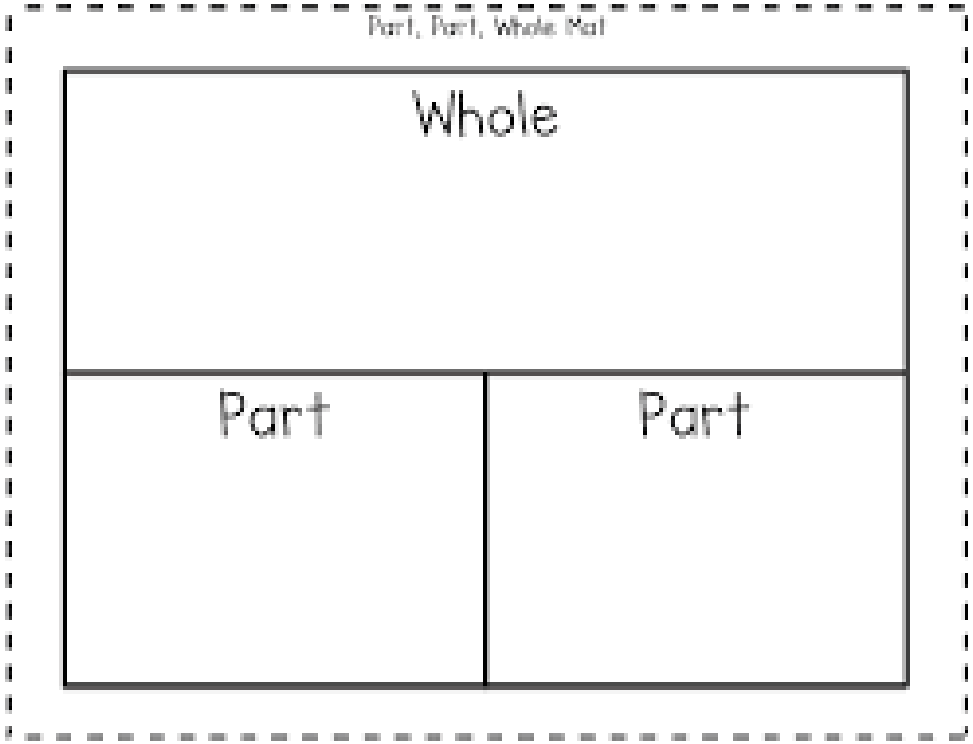
6 + 5 =

Keep it simple!

Maths is not always about 'big' numbers and times tables – it is about being able to apply concepts to different situations, problem solve, and find different strategies to check working.

e.g.'12 + 6 = 18 '

- How do you know?
- Can you show me this as a picture?
- What are the parts of 18?
- How can you check that is correct?
- What would 6 + 12 be?
- Can you say that in a number sentence?



Place Value

Place value is at the heart of the number system. All digits have a value and a secure understanding of this will enable children to use and understand different calculation methods.

thousands	hundreds	tens	ones
1	2	3	9

Pictorial

Year 1

How many chairs are there?
Are there more bowls or cups?
To have 10 bananas, how many more would you need?

Year 2

How many apples do you think are in each row?
Explain your thinking.
Do you think there are more blueberries or bananas?

The vocabulary:
‘ones’ not ‘units’
exchanging not borrowing
‘calculations’ or ‘equations’ not ‘sums’
When carrying put the number above not below.
Always put operation on the left

Concrete – equipment used
Foundation need to be secure 1 to 5, then 10 then 20 by end of year. Not just reciting numbers, 1 to 1 correspondence
Counters, animals etc. numicon, counting songs, in sand, water activities
Positional language, shapes – name and simple properties

Early Learning Goal for number

Children count reliably with numbers from one to 20, place them in order and 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. They solve problems, including doubling, halving and sharing.

Y1 – using cubes, bears, animals
10 frames for number bonds
Using laminated boards, drawing objects then crossing off eg 17 -  = 6 or part/part/whole
Multiplication in arrays, division putting into groups, 2, then 5 and 10 by end of Y1
Using money, recognition of coins
Shapes, describing, measures cm/m, g/kg, ml/l

Y2

Numbers up to 100, add and subtract 2 digit numbers (Diennes)

Multiplication and division 2, 5, 10

Fractions halves, quarters, thirds

Time up to 5 minute intervals

Measures inc temp, choosing appropriate units

2D and 3D shapes inc symmetry, faces, vertices, edges

Introduce right angles, turns, position

Pictograms, tally charts, block diagrams, tables

Suggested websites

nrich.maths.org

www.ncetm.org.uk

www.twinkl.co.uk

Searching for ‘helping your child with maths’ finds many more websites.