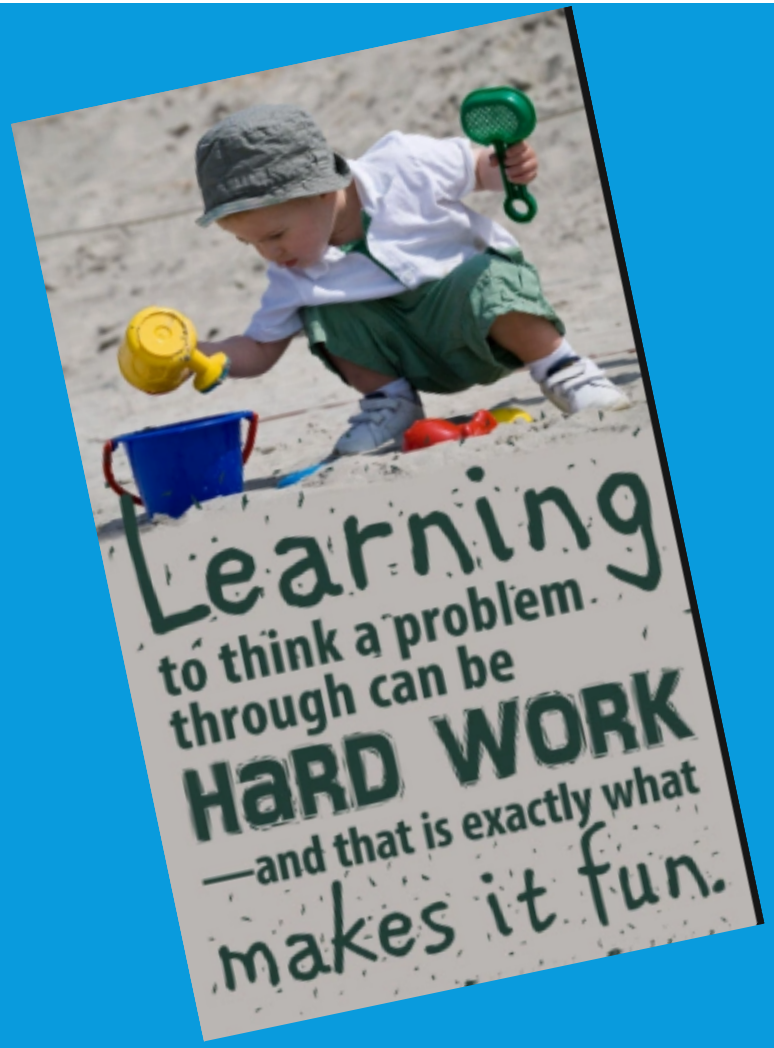
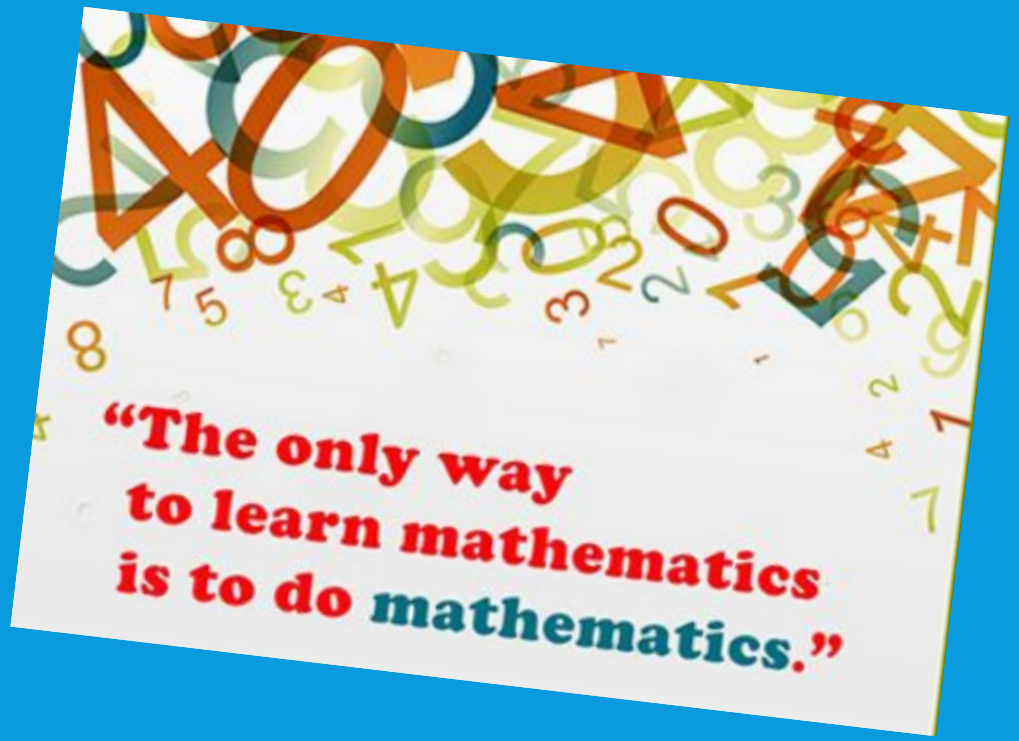
MATHS MASTERY SESSION FOR PARENTS
OCTOBER 2019





AIMS OF SESSION

- To get an insight into how Maths is taught at St Matthew's School.
- To gain an understanding of the Maths Mastery curriculum and expectations.
- To take part in a variety of Maths activities.
- To take away some ideas to support your children at home.
- A chance to see progression across the school

HOW DO YOU FEEL ABOUT MATHS??

GROWTH MINDSET

 # I can

I can't do it *yet*!!!

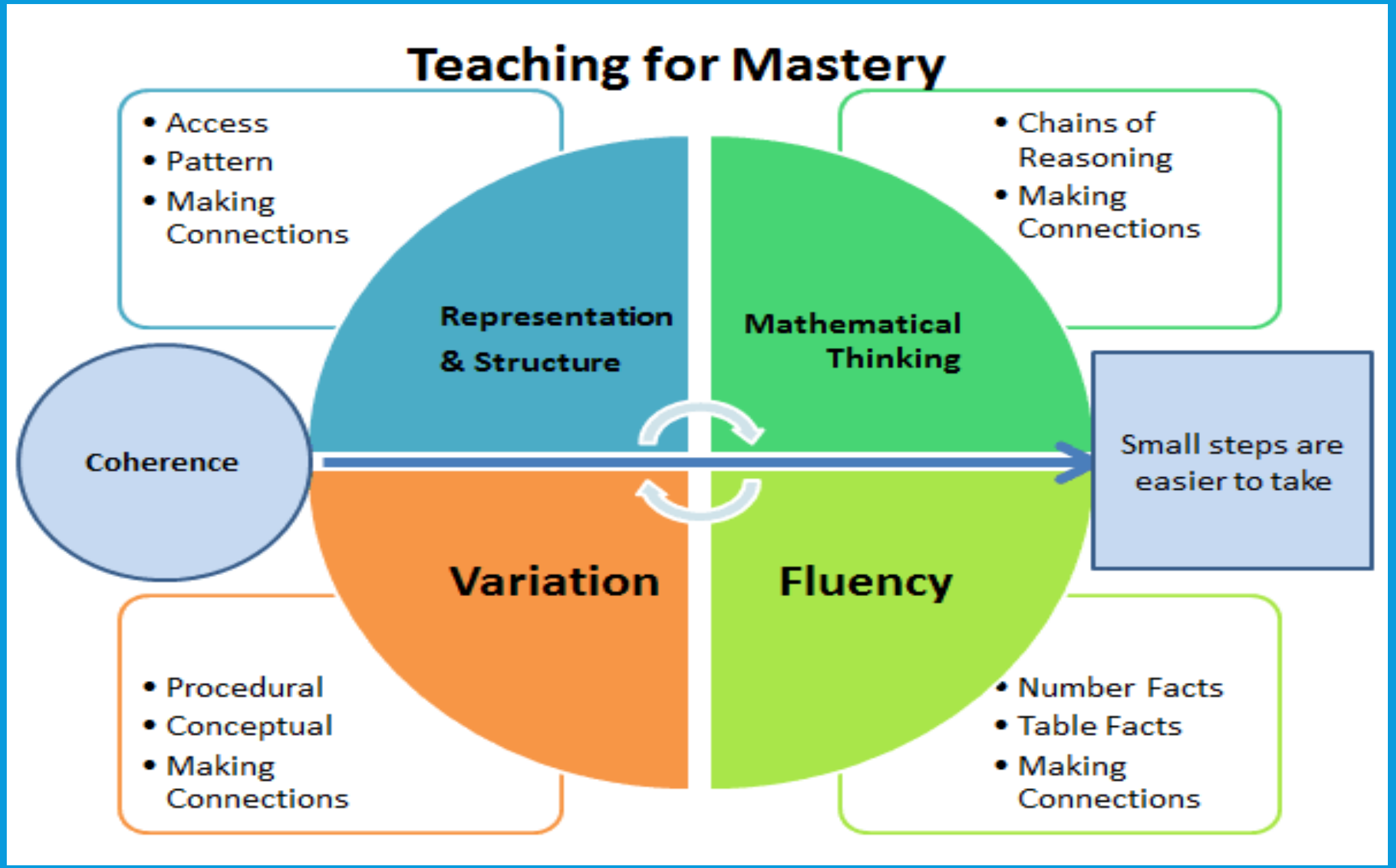
Making mistakes is GOOD!!

The answer is just the start of the journey

How many different ways??

OUR JOURNEY SO FAR…..

- Maths Lead (Mrs Torley KS2 and Mrs Aitchison KS1)
- 2 year programme from Sept. 2018 – 2020
- Mastery lesson observations at other schools
- Visit to St Matthew's from Lead Specialist to help form an action plan and support lead teachers
- Tasks to complete which involve the whole staff
- Feedback to staff to implement mastery ideas in their classroom
- Monitoring/evaluation/review


Teaching for Mastery
• Access
• Pattern
• Making Connections
• Chains of Reasoning
• Making Connections
Representation & Structure
Mathematical Thinking
Coherence
Small steps are easier to take
Variation
Fluency
• Procedural
• Conceptual
• Making Connections
• Number Facts
• Table Facts
• Making Connections

- Teaching for Mastery involves:
- High expectations for all children
- Topics covered in greater depth over a longer time
- Number sense and place value coming first
- Problem solving is central, ensuring an understanding of why it works so that children understand what they are doing rather than just learning to repeat routines without grasping what is happening
- Challenge being provided through greater depth, rather than accelerated content (eg. moving onto next year's concepts) – this allows children to deepen their knowledge and improve their reasoning skills rather than accelerating on to new curriculum
- Not differentiating 3 to 5 ways, instead using targeted questioning and application
- Mixed groupings in class

FLUENCY, REASONING, PROBLEM SOLVING CONCRETE, PICTORIAL, ABSTRACT

- **Fluency**
- Quick recall of facts and procedures
- Make connections in mathematics

- **Reasoning**
- The way pupils speak and write about mathematics is important, they should be able to say not just what the answer is, but *how* they know it is correct. This is key to building mathematical language and reasoning skills.

- **Problem Solving**
- Mathematical problem solving is at the heart of the Mastery approach. Pupils apply their skills of fluency to solve complex problems and real-life situations.

FLUENCY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World Top 50 Classes
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1 Tyler G John Taylor Collegiate, MB, Canada 16,771
2 Sahand H Deansbrook Junior School, LONDON, United Kingdom 11,813
3 Farhan M S Green Valley Islamic College, NSW, Australia 11,223
4 Zuhaib I Wensley Fold Church of England Primary School, Blackburn, 11,198
5 Harvey A Little Common School, Bexhill-on-Sea, United Kingdom 11,128
6 Caitlin P Orchard Vale Community School, Barnstaple, United 11,070
7 Maxine Bo W Yew Chung International School of Shanghai - Hong Qiao 11,064
8 Jade K New Farm State School, QLD, Australia 10,490
9 Dihein N Belmont Castle Academy, Grays, United Kingdom 10,104
10 Kiara S Busselton Primary School, WA, Australia 8,452
Mathlete of The Week
Dylan Mark J
Crawford Preparatory - Fourways
South Africa
PRIZE: Specially Made Trophy
How is it calculated?
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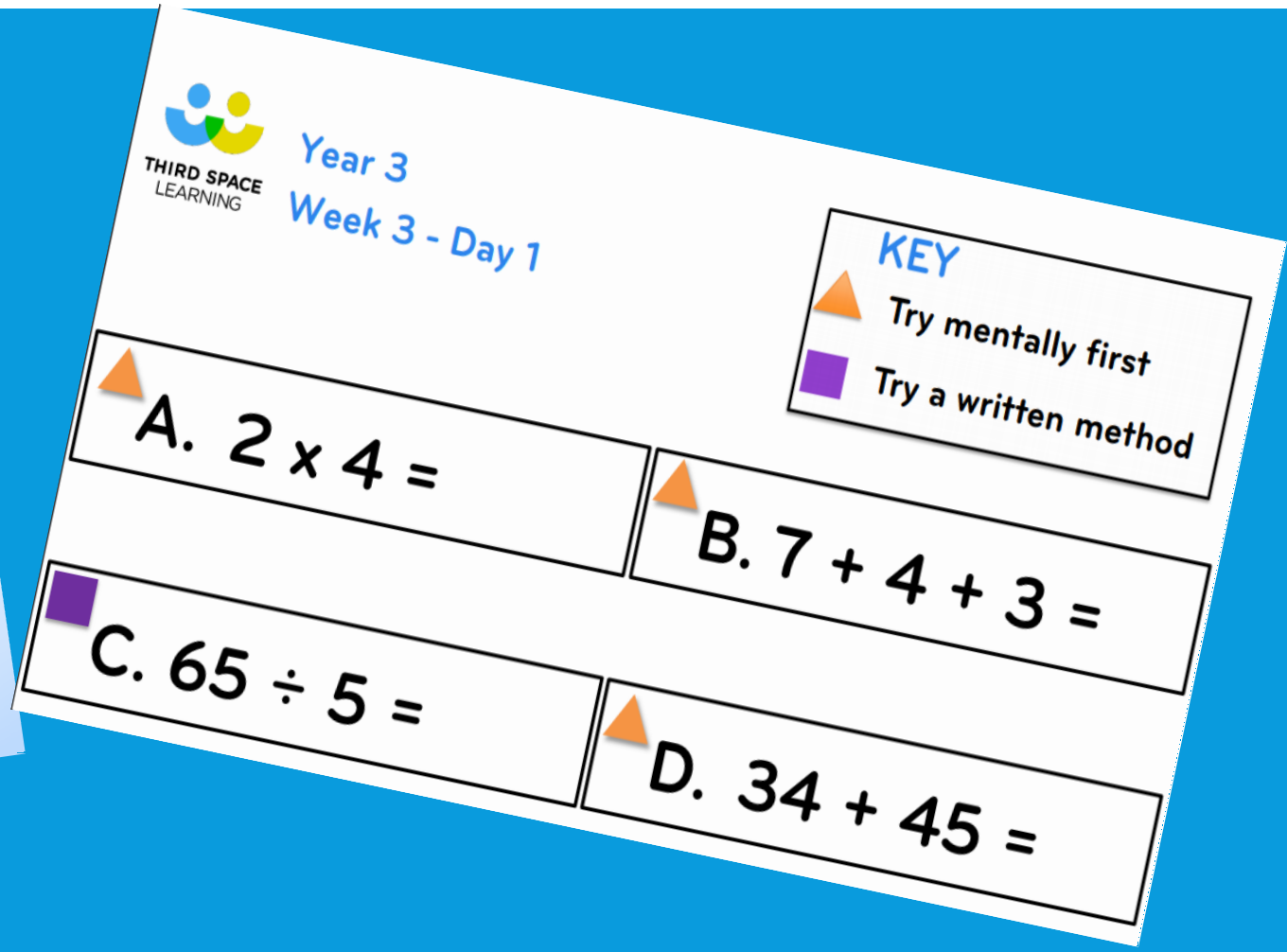
3P Learning


THIRD SPACE LEARNING
Year 3
Week 3 - Day 1
KEY
Try mentally first
Try a written method
A. 2 x 4 =
B. 7 + 4 + 3 =
C. 65 ÷ 5 =
D. 34 + 45 =

REASONING AND PROBLEM SOLVING

Teddy thinks that,

Explain the mistake he has made.

Can you show the correct answer using concrete resources?

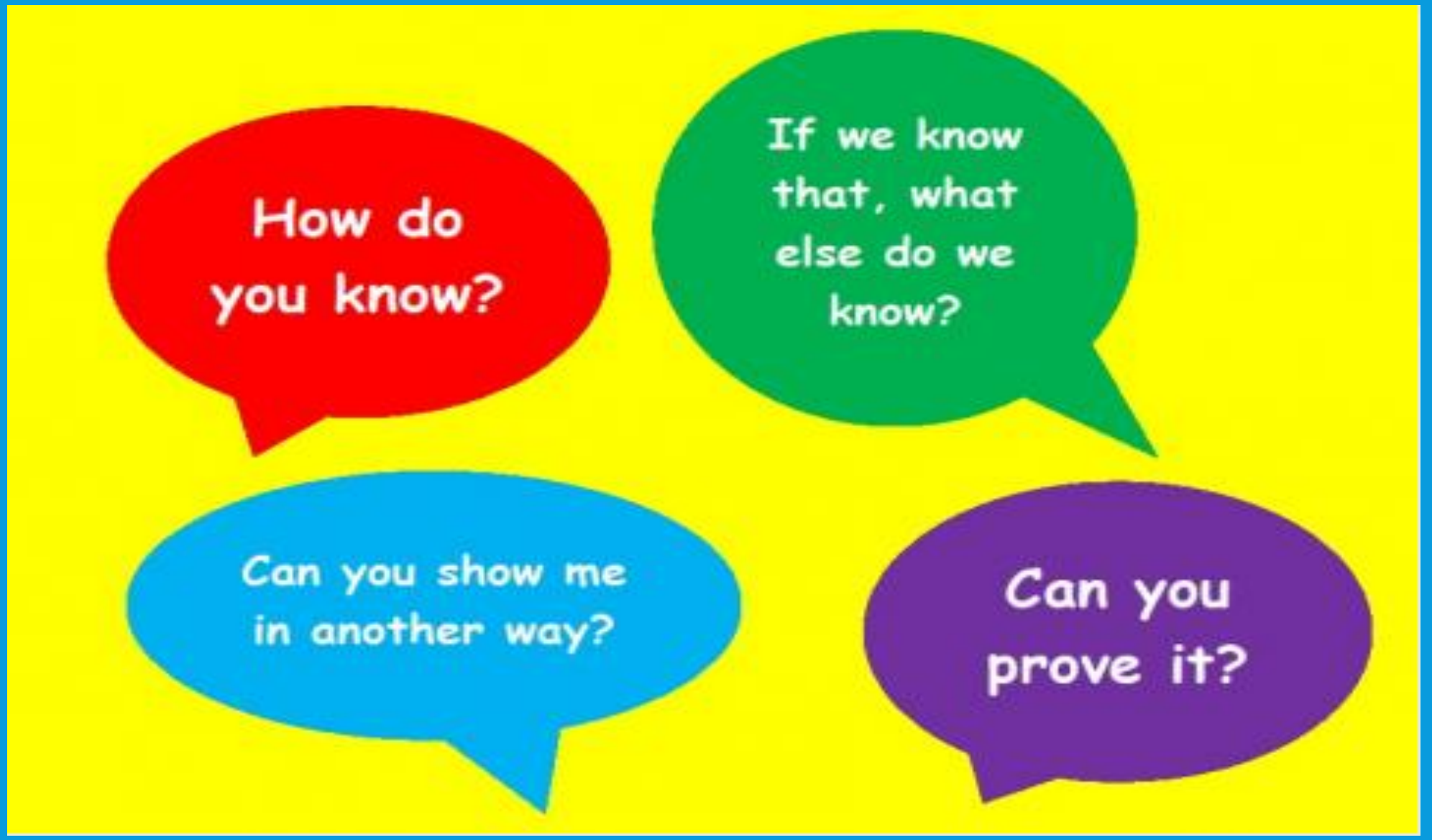
Jeff says:

My number has five thousands, three hundreds and 64 ones

My number has fifty three hundreds, 6 tens and 4 ones

John says:

Who has the largest number? Explain.


How do you know?
If we know that, what else do we know?
Can you show me in another way?
Can you prove it?

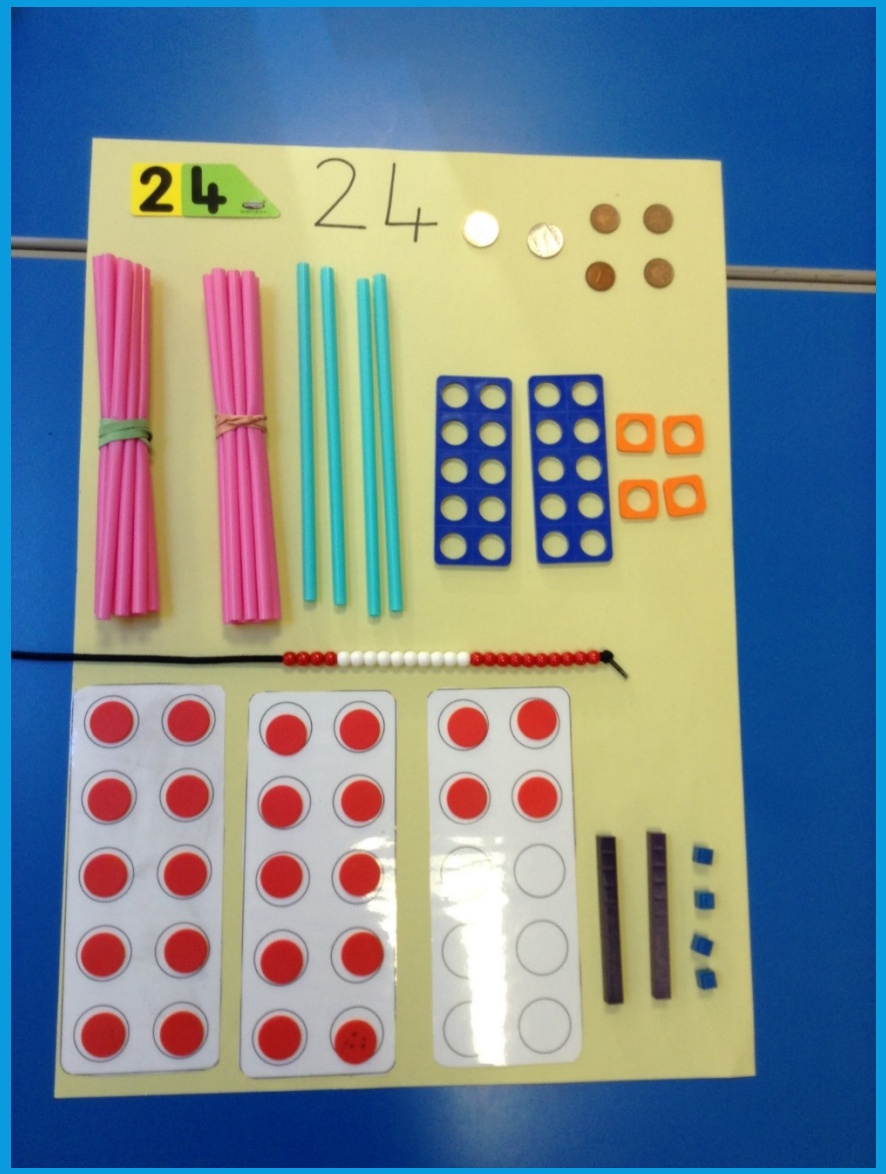
How do we teach maths at St Matthew's ?

- **Concrete** – children have the opportunity to use concrete objects and manipulate them to help them understand and explain what they are doing.

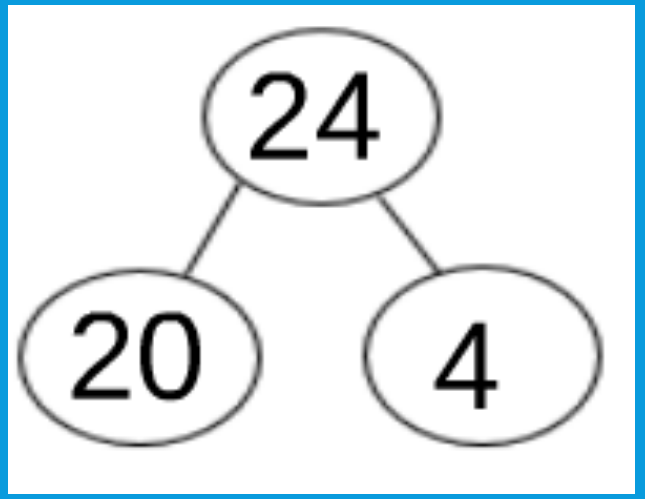
- **Pictorial** – children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.

- **Abstract** – with the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.

- Mathematical language – from reception to year 6

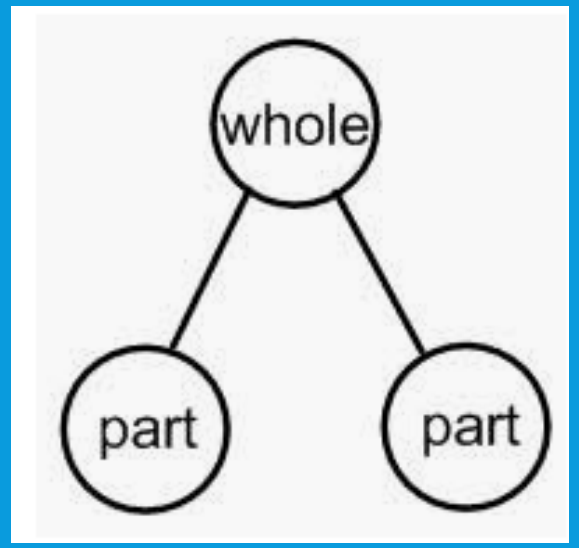


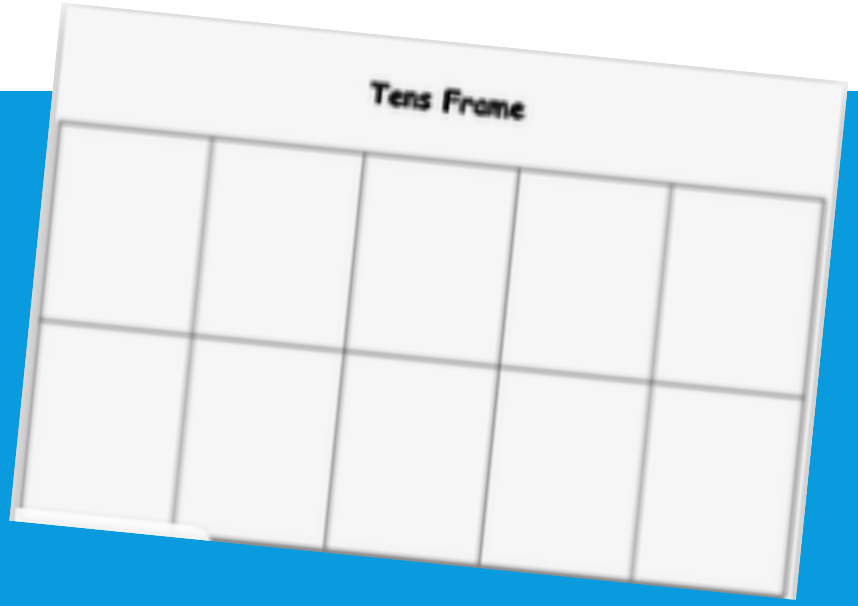
How would you represent the number 24?



20 + 4 = 24

HOW WE ARE SUPPORTING LEARNING





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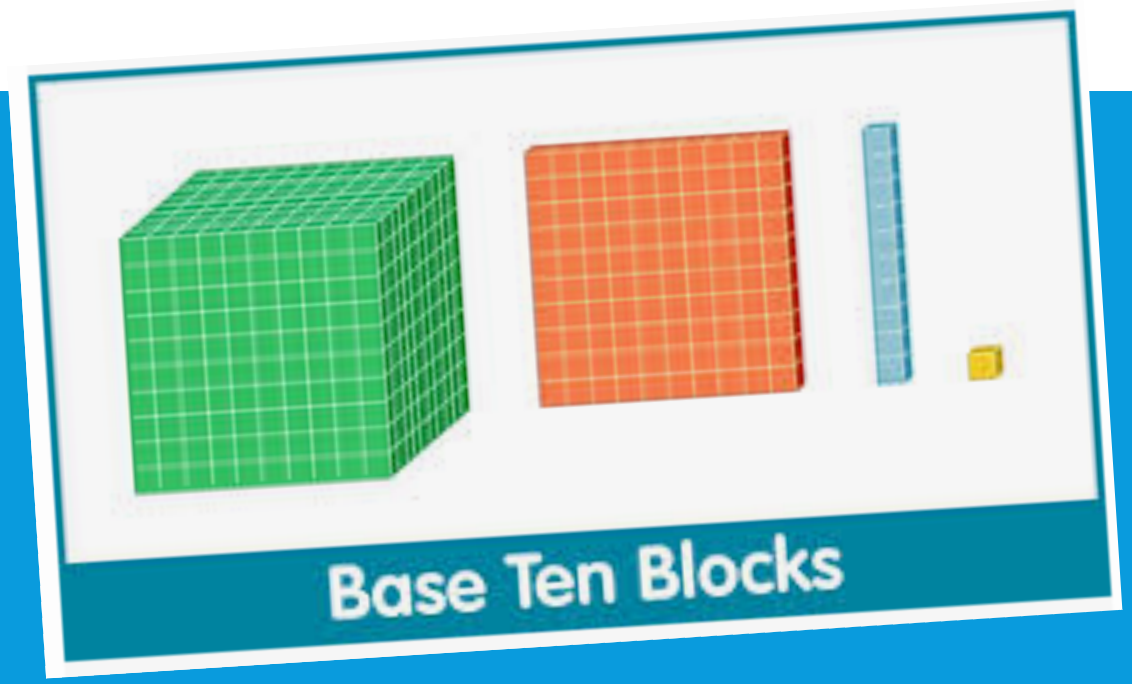

TH	H	T	O
1000	100 100	10 10 10	1 1

1000	100	10	1
2000	200	20	2
3000	300	30	3
4000	400	40	4
5000	500	50	5

PRACTICAL ACTIVITIES IN CLASS

- Based on place value – range of activities concrete, pictorial, abstract, problem solving
- Teachers there to facilitate and ask questions
- Have a go!!! Have FUN!!
- Can go anywhere in school to see progression or just own child's class

5 ACTIVITIES

- Place value chart
- Part Part Whole Model
- Bar Model
- Reasoning tasks
- Representing numbers
- Examples of assessment