MATHS WORKSHOP FOR PARENTS

APRIL 2019

What is teaching for Maths Mastery?

Since mastery is what we want pupils to acquire (or go on acquiring), rather than teachers to exhibit, we use the phrase ‘teaching for mastery’ to describe the range of elements of classroom practice and school organisation that combine to give pupils the best chances of mastering mathematics.

And mastering maths means acquiring a deep, long-term, secure and adaptable understanding of the subject. At any one point in a pupil’s journey through school, achieving mastery is taken to mean acquiring a solid enough understanding of the maths that’s been taught to enable him/her move on to more advanced material.

Teaching for Mastery

MathsHUBS

1. We ALL start the journey TOGETHER

2. Some children will need a little additional support along the way

3. Some children, who feel confident, will be let loose. They'll be able to explore deeper into the woods, before returning to the group to continue on with the journey.

4. Children will not be racing off ahead on a different journey.

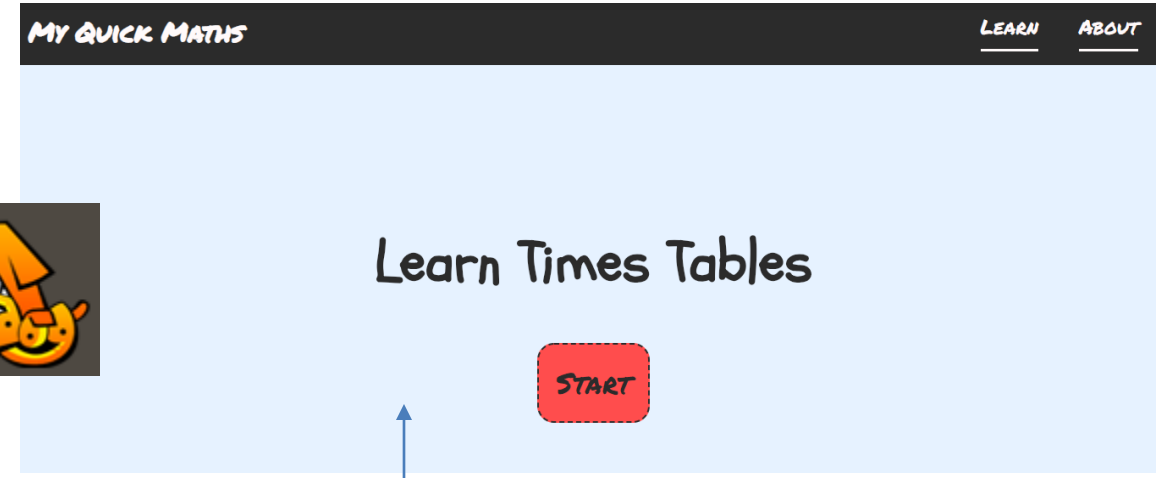
5. Children will not be left behind alone and isolated.

Martin Adsett
Mastery Specialist

We're Going on a Maths Hunt

Where are we on our Maths Mastery journey?

Fluency



25 questions under timed conditions!

Fluency starters

MATHS CLUB

Well done to our two Green Megabrain winners! 99 questions correct out of 100 in 3 minutes!

Maths Club is a mental mathematics initiative that was introduced across the school in September 2013.

Year 4 multiplication tables check

A requirement from June 2020 (our current Year 3s will be the first to take the MTC) .

What does the check cover?

The check tests knowledge of multiplication tables between 2 and 12. There'll be an emphasis on the 6, 7, 8, 9 and 12 tables because these are considered to be the most difficult.

Here are the minimum and maximum numbers of questions that'll be included in the check from each multiplication table:

Multiplication table	Minimum number of questions	Maximum number of questions
2	0	2
3	1	3
4	1	3
5	1	3
6	2	4
7	2	4
8	2	4
9	2	4
10	0	2
11	1	3
12	2	4

Year 4 multiplication tables check

A requirement from June 2020 (our current Year 3s will be the first to take the MTC) .

Test format

Each pupil has to answer **25 questions**.

The test is **on-screen**.

They have **6 seconds** to answer each question. An on-screen timer will count down the time available for each question.

There'll be multiple versions of the test. The version each pupil gets is selected at random.

Year 4 multiplication tables check

A requirement from June 2020 (our current Year 3s will be the first to take the MTC) .

Which pupils take it?

All year 4 pupils should take the check.

However, your headteacher makes the final decision about whether a pupil shouldn't take the check. For example pupils shouldn't take the check if any of the following applies:

- They're absent during the entire check period
- They're unable to access the check, even using the range of access arrangements
- They're considered unable to answer the easiest questions, or are working below the national curriculum expectation for **year 2** multiplication tables
- They've just arrived in school during the check window, with English as an additional language, and there's not enough time to establish the standard at which they're working

Pupils will be awarded a mark out of 25.

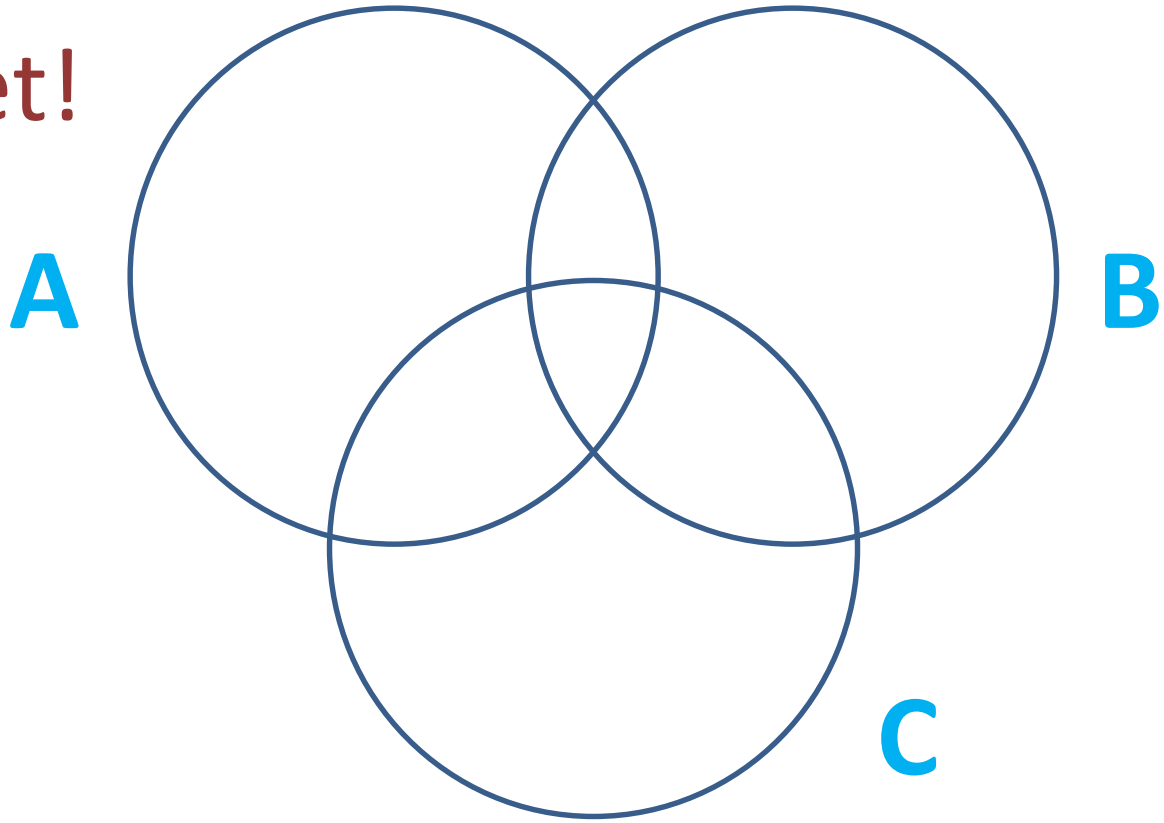
School-level results **won't** be published in performance tables.

What might a Maths Mastery lesson look like at Thameside?

Fluency starter

Fluency combines a deep conceptual understanding with an ability to recall accurately and rapidly. It is not just about repeating back the fact. It is about flexibility, efficiency and accuracy.

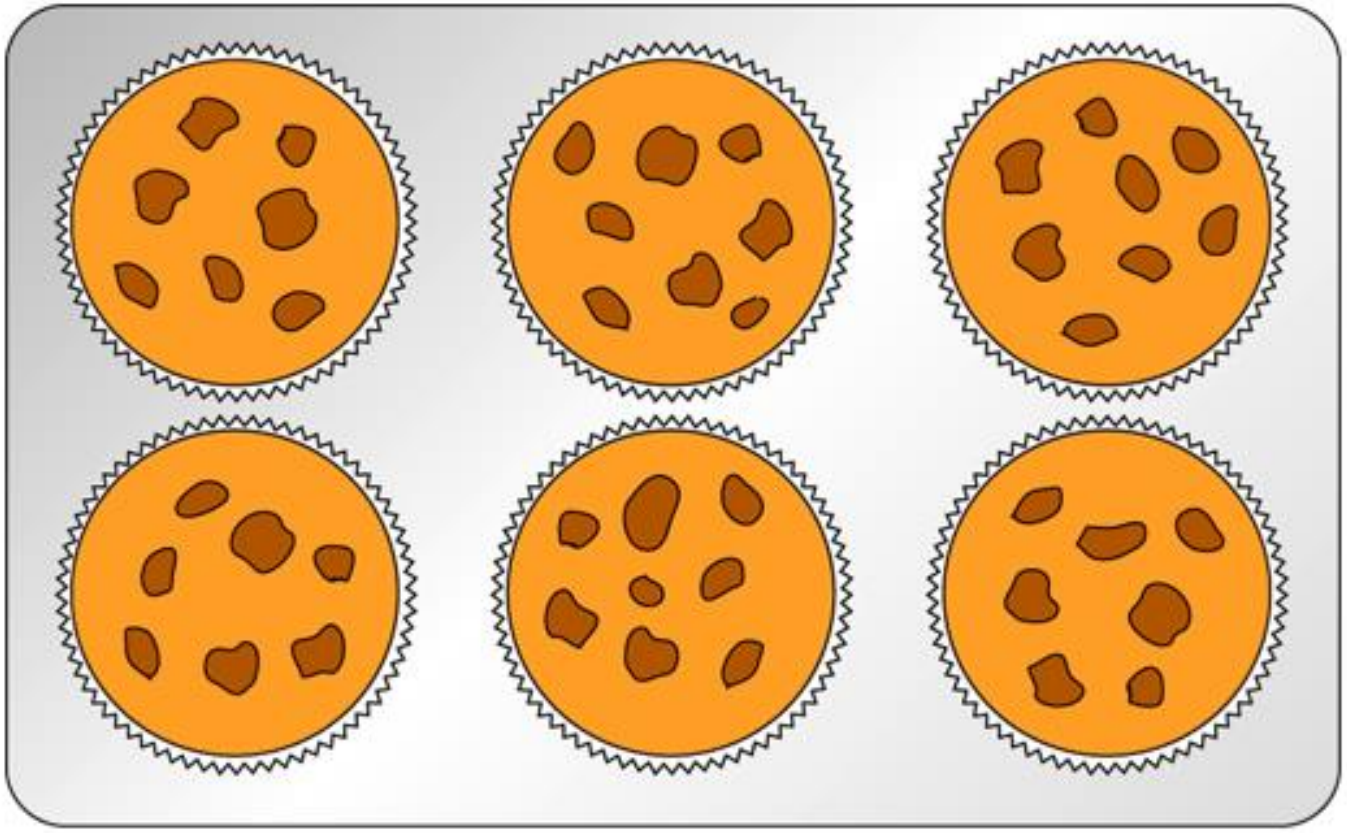
Guess my set!



Teach it

Teacher modelling using stem sentence to reinforce main concept.

KLP: The ‘whole’ can refer to a full group of discrete objects.



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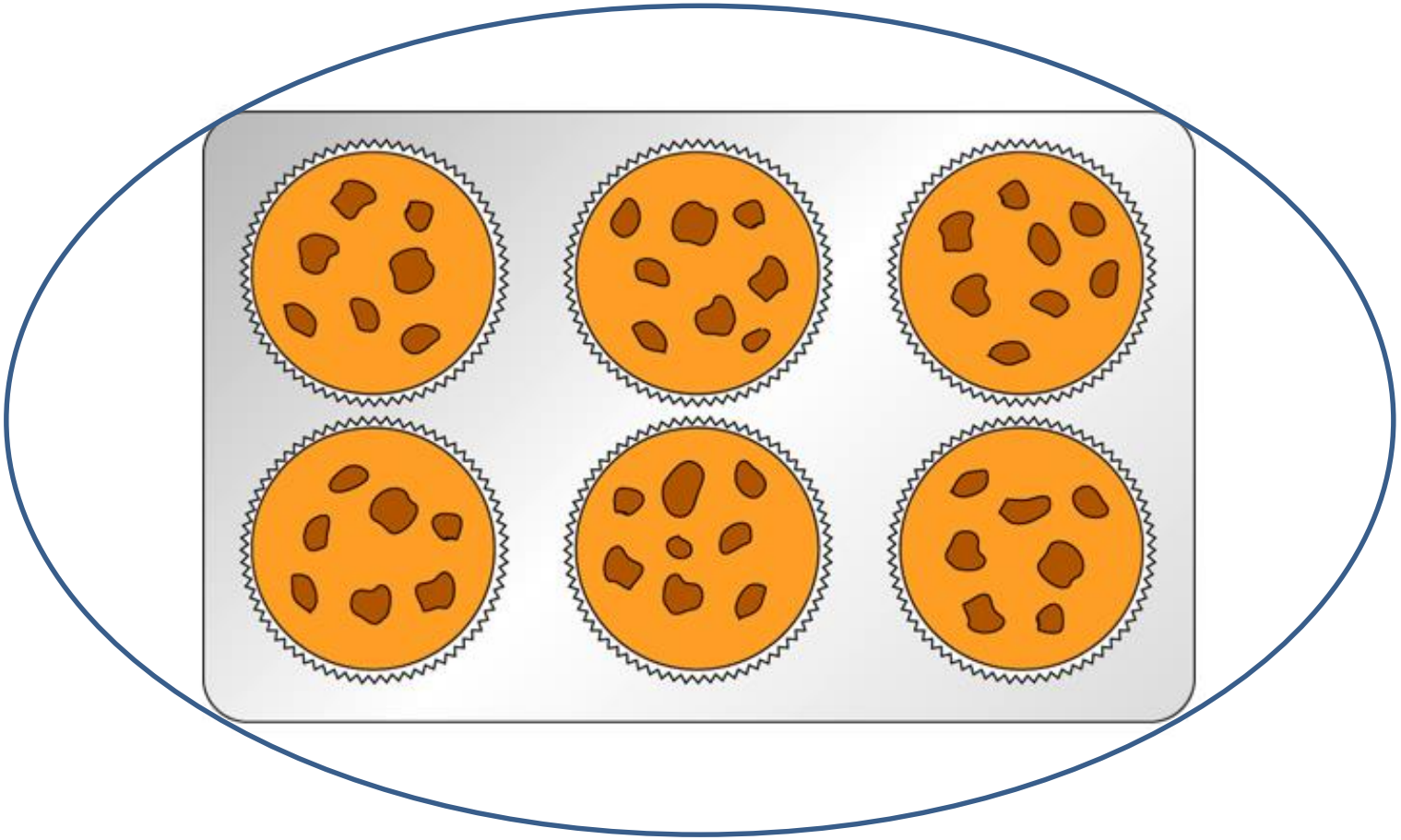
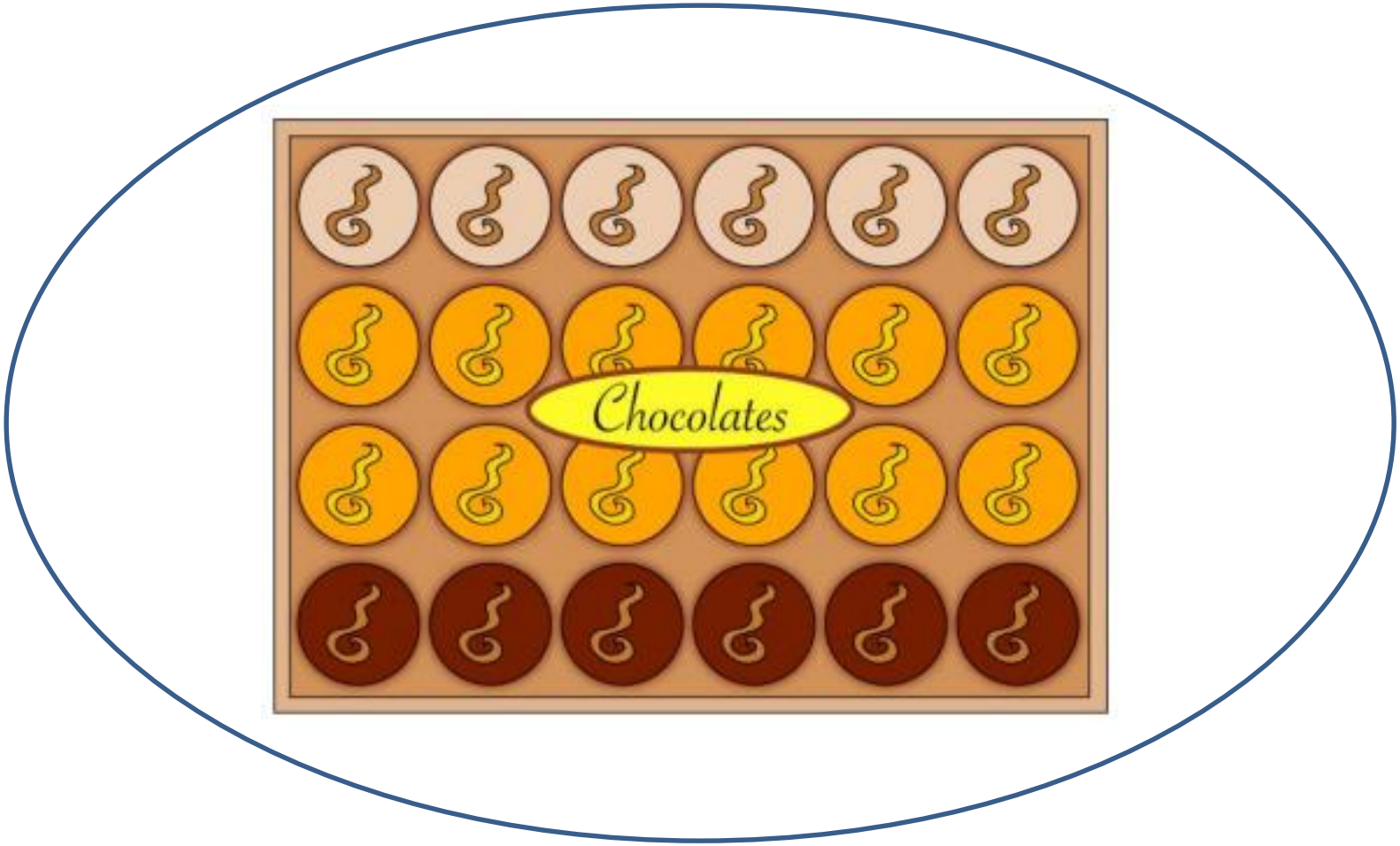
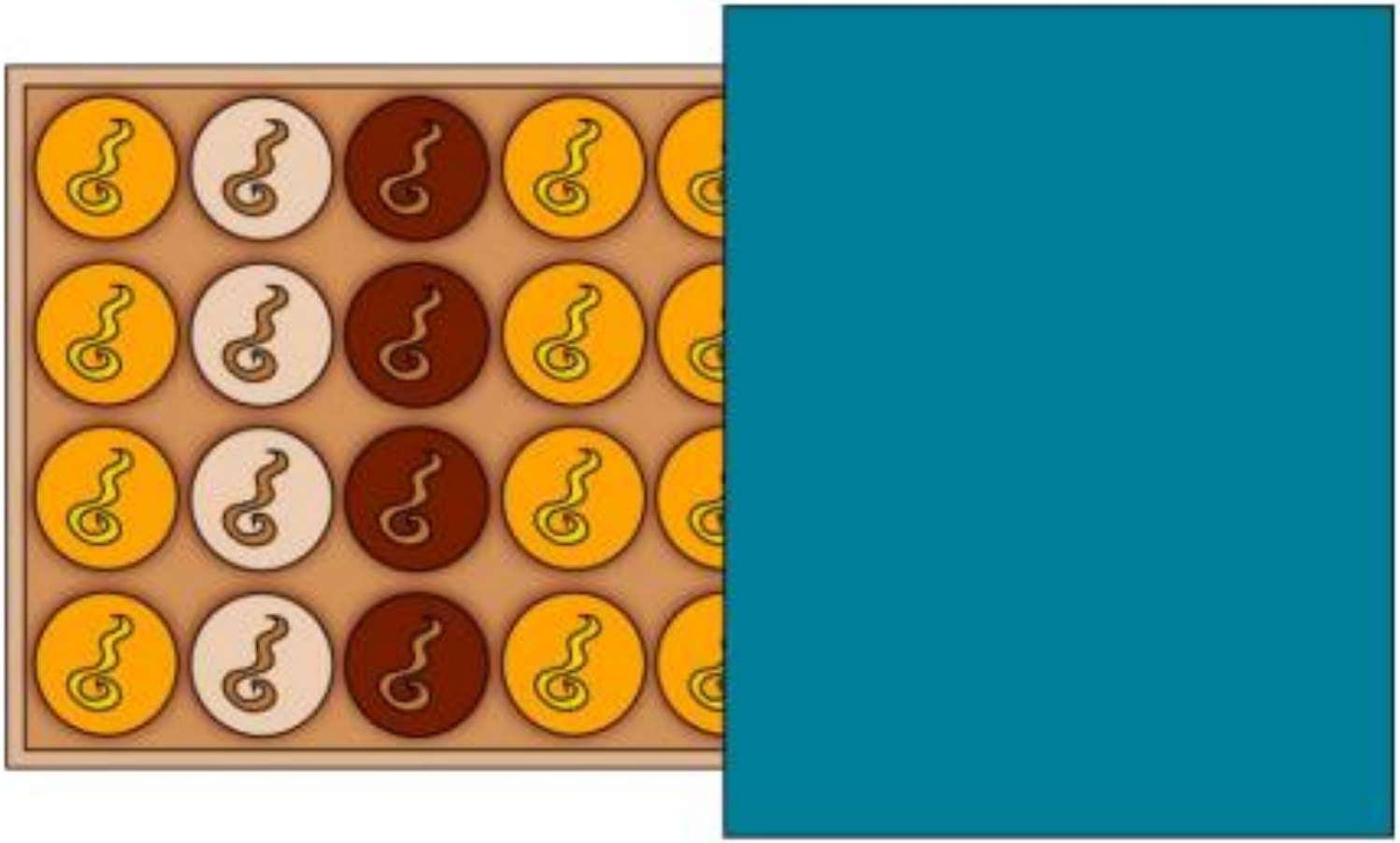


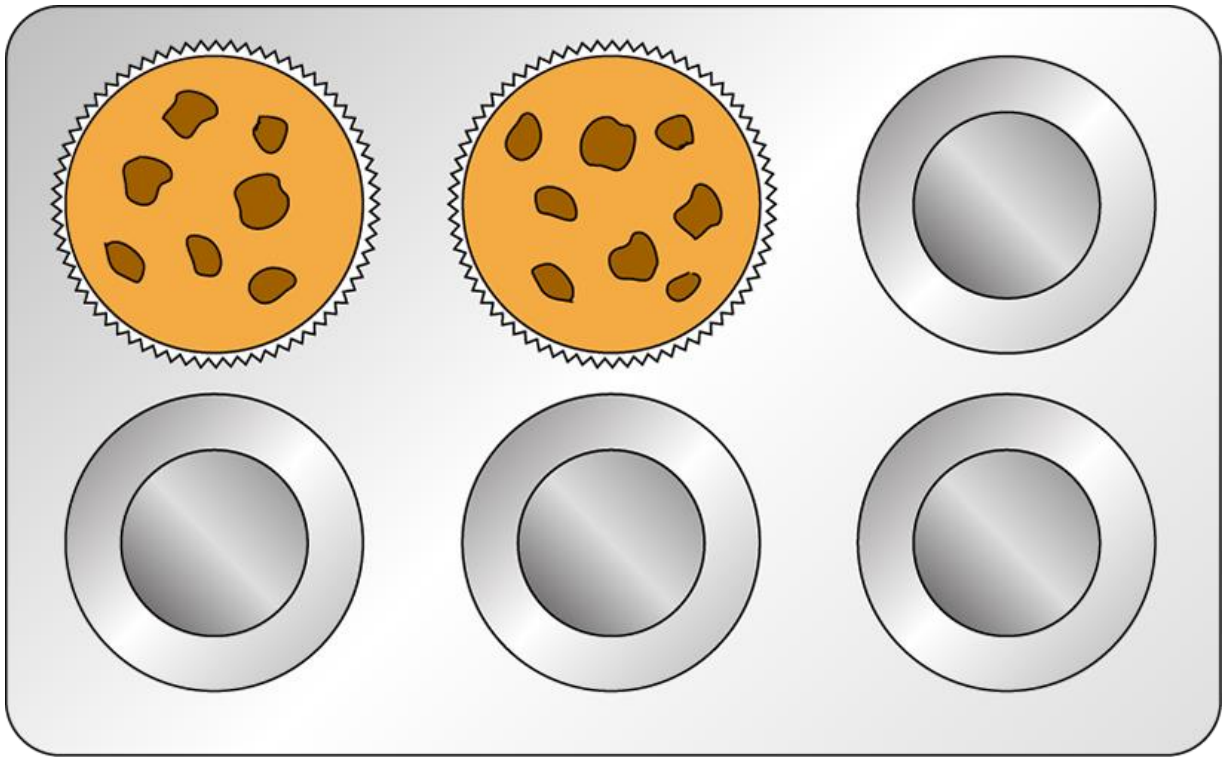
Use the stem sentence: ***'This is a whole group of ___, because I have all of them; none are missing.'***



Use the stem sentence: ***'This is a whole group of ___, because I have all of them; none are missing.'***

- *'Is this a whole box of chocolates?'*
- *'How do we know?'*





Use the stem sentence: '***This is not a whole group of ___ because we don't have all of them; some of them are missing.***'

An alternative stem, which uses the term 'part' is: ***'This is not a whole group of ___ because only part of the ___ has ___ in.'***

Do it

Children have a go at solving something very similar to whatever was modelled in previous section. Should be simple to start with so that they are practicing the procedure and what it actually is that they are learning to do. Usually scaffolded. If this part of the lesson is too hard, children will not master the KLP.

Use the stem sentence: ***'This is a whole group of ___, because I have all of them; none are missing.'***

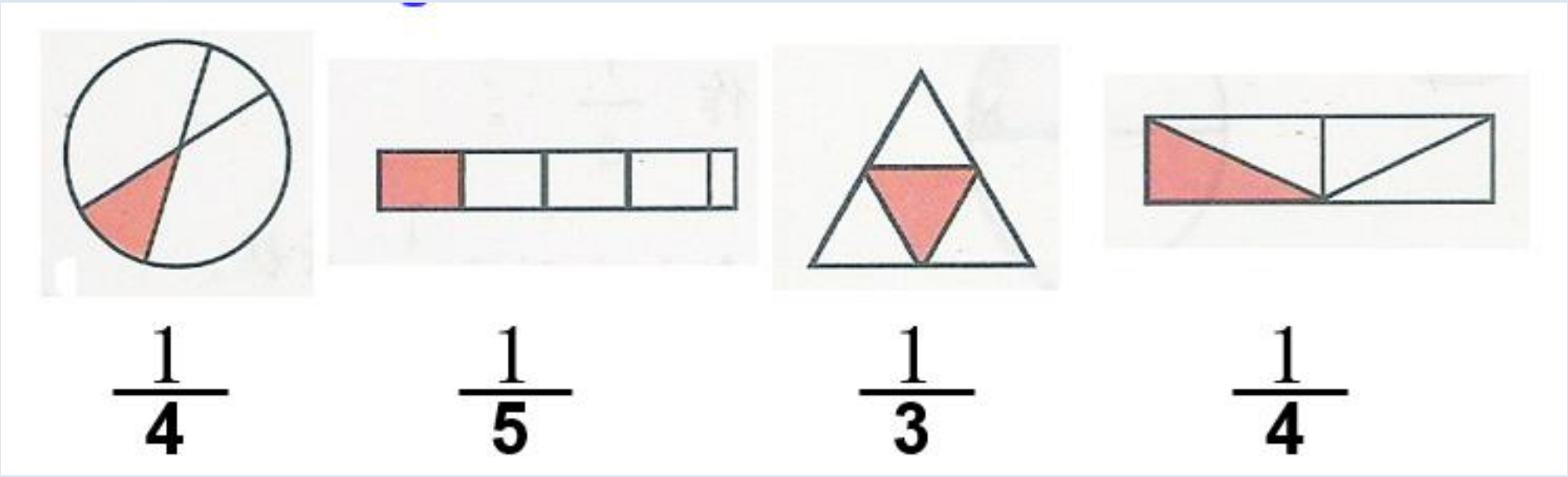
Use the stem sentence: ***'This is not a whole group of ___ because we don't have all of them; some of them are missing.'***

An alternative stem, which uses the term 'part' is: ***'This is not a whole group of ___ because only part of the ___ has ___ in.'***

Secure it

Where teachers predict misconceptions and address them.

What do you think?



Solve it

Children practice the KLP using a variety of concepts and reasoning skills. Usually high ceiling low threshold tasks.

Square Subtraction

Stage: 2 ★★★

Choose any number. This is going to be your particular number for this proof.
Square your chosen number.
Subtract your starting number.
Is the number you're left with odd or even?
Create a model or a picture of your calculation, using your chosen number, and examine this model carefully.
Can you use this one model to prove that your result is always true and not just true for the particular number that you chose to start with?

What have we learnt?

Refer back to stem.

D

O

K

Can you write a word problem to describe this equation?

$$74 = 15t + 2m$$

CTG

Use concrete materials to represent these equations.

$w + 4 = 7$ $\quad$ $10 = 2 + t$ $\quad$ $3 + x = 9$

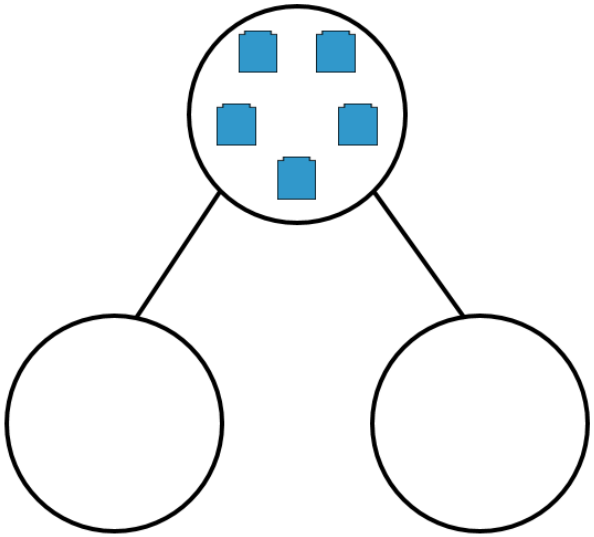
Why are visual representations so important?

All children can benefit from using visual representations. Visual representations are a powerful way for students to access and then reason about abstract mathematical ideas. Helping students choose the "right" visual representation often depends on content and context. In some contexts, there are multiple ways to represent the same idea.

In addition, the ability to draw on multiple representations is an important aspect of pupils' mathematical understanding (Hiebert & Carpenter, 1992; Greeno & Hall, 1997). Visual representations enable pupils to make connections between their own experience and mathematical concepts (Post & Cramer, 1989), and therefore gain insight into these abstract mathematical ideas

Handout

Part–part–whole



12			
3	3	3	3

A problem to solve

A woman is on a diet and goes into a shop to buy some turkey slices. She is given three slices which weigh in total 1/3 of a pound but her diet says that she is only allowed to eat a 1/4 of a pound.

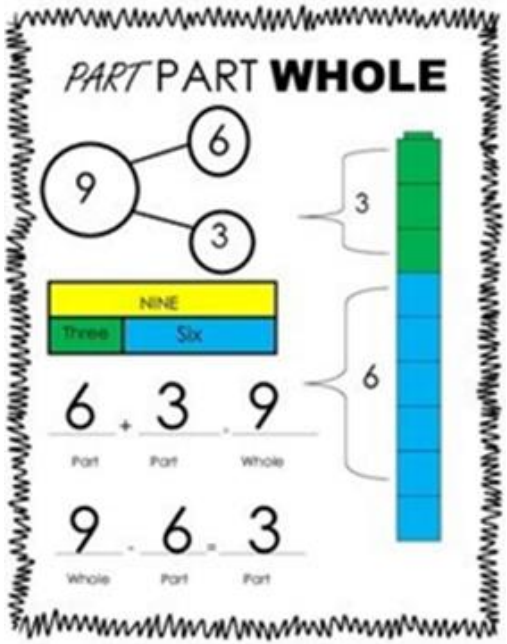
How much of the three slices that she bought can she eat while remaining true to her diet?

MATHS AT THAMESIDE

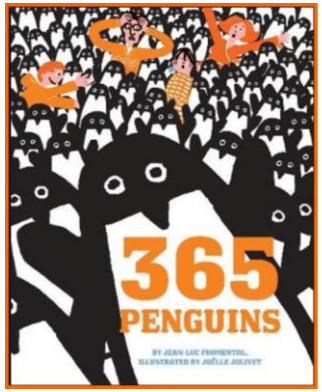
KEY SKILL						
FS: Calendars	Y1: Piggy banks	Y2: Rulers	Y3: Watches	Y4: Wallets	Y5: Enterprise	Y6: Enterprise
 Time (days of the week, seasons, months, dates etc)	 Money (counting and recognising)	 Measuring length	 Learn to tell the time.	 Money (spending, cheques)	 Two weeks per year. £20 budget. Which class can make the most money? Spend what make on class.	

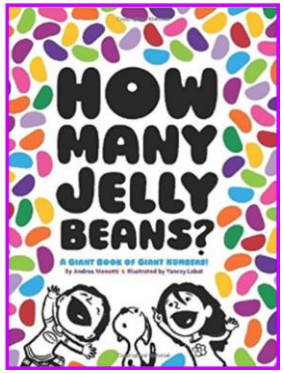
Maths HUBS
Bucks, Berks and Oxon

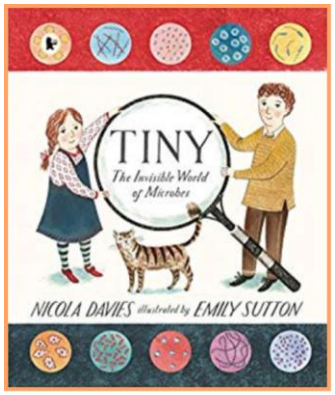
Bar modelling project

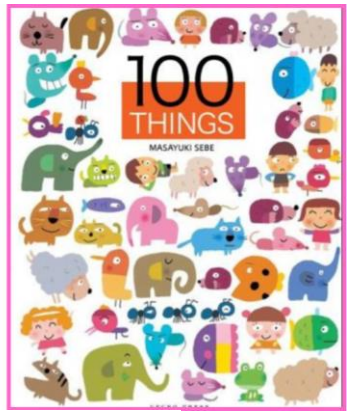


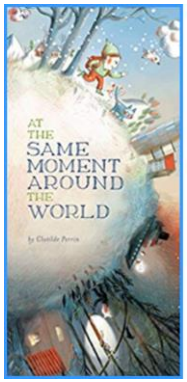
MATHS AT THAMESIDE

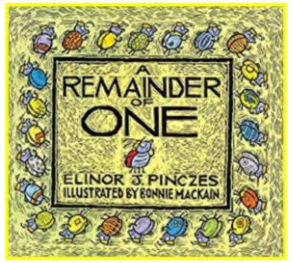






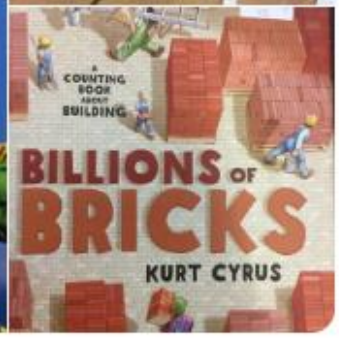






Thameside Primary @ThamesideSch · Feb 4

Construction is underway for our times table towers. Who will make the tallest?
#numberday #GVHtps #billionsofbricks



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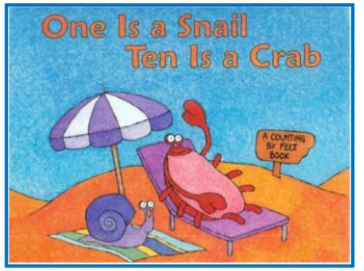
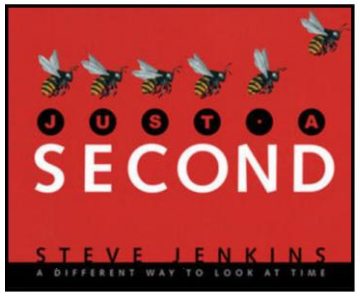
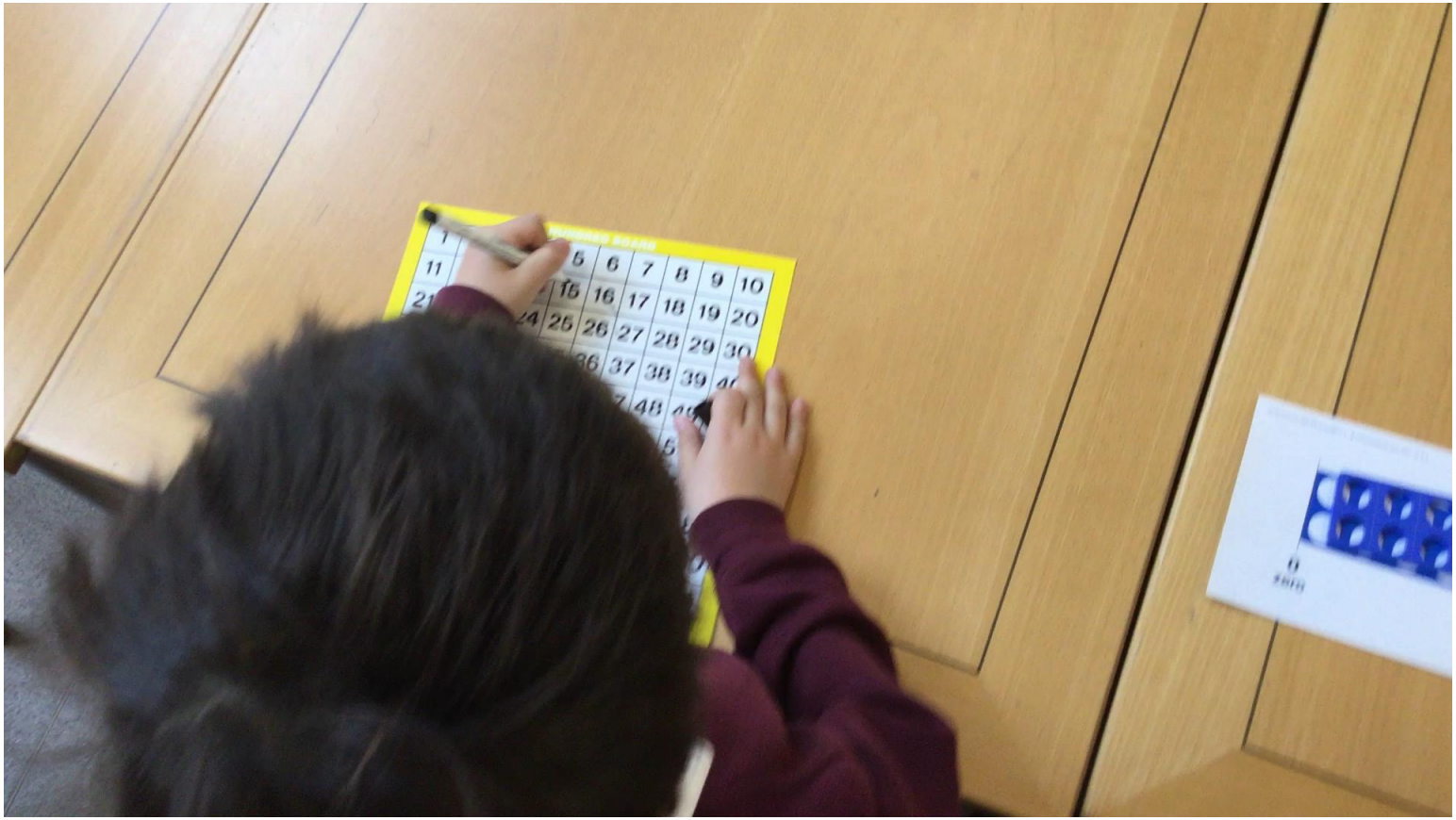




CALCULATION VIDEOS



MATHS 4 KIDS

Click here!

WHAT ELSE IS ON OUR WEBSITE?

Click here to visit our website.

ANY QUESTIONS?

THANK YOU FOR COMING!