

National Centre  
for Excellence in the  
Teaching of Mathematics



 **MathsHUBS**  
London South West

# Teaching for Mastery at Allfarthing Primary School





## Key questions:

- Where does today's theory come from?
- What does mastery planning and differentiation look like?
- How does this look in Allfarthing and what are our next steps?

# Education

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## Half of primary school pupils to follow Chinese style of learning maths with focus on whole-class teaching



## Government to spend £41 MILLION to teach children maths south Asian-style

THOUSANDS of junior schools in England will copy the south Asian style of teaching maths, the Department for Education has revealed.

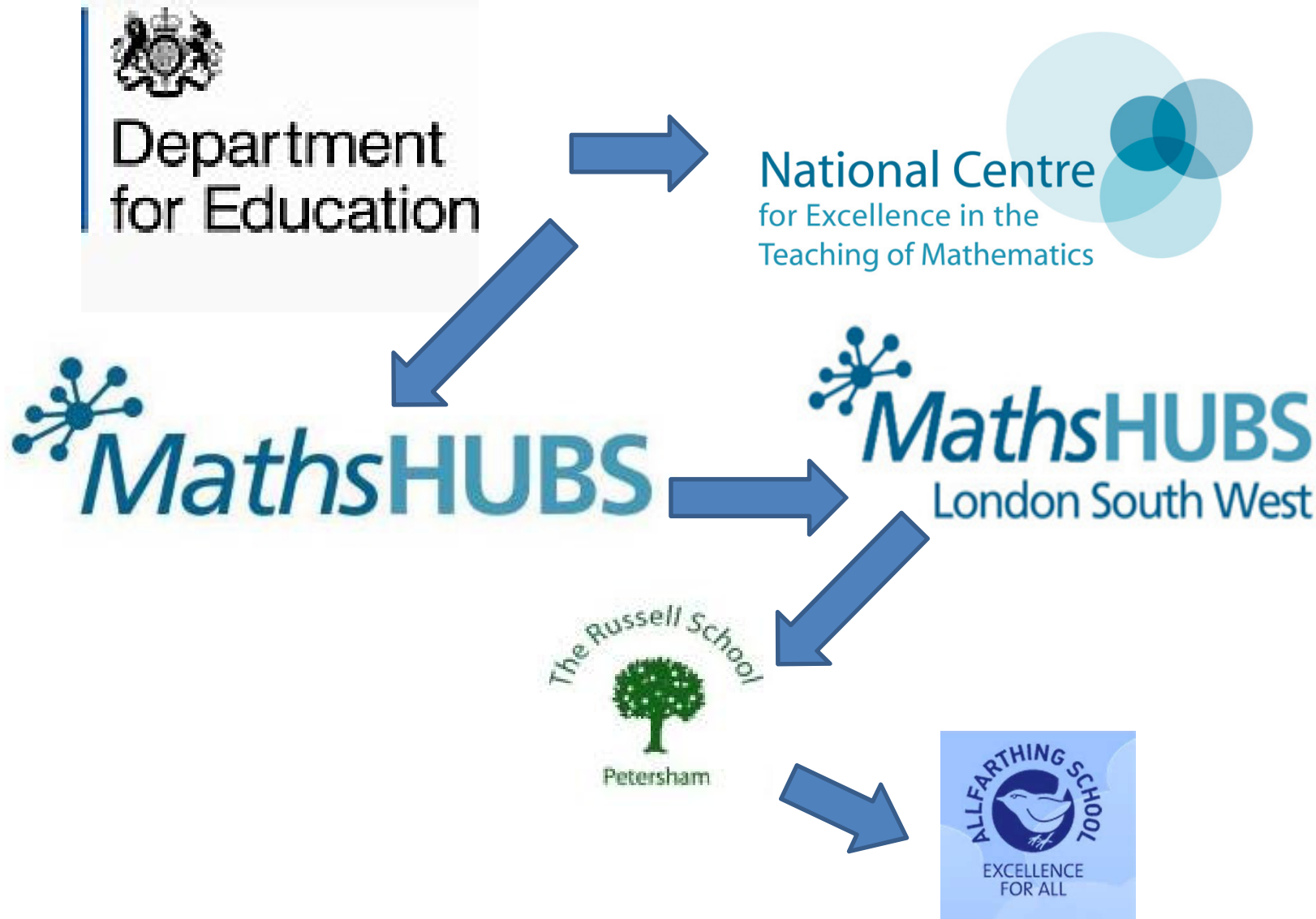
PUBLISHED: 12:12, Tue, Jul 12, 2016

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# June 2014 – Maths hub programme launched



Raise standards in Maths education at all levels across South West London (with a focus on mastery style teaching).

# Differentiation – a different picture

The New Curriculum sets higher expectations for pupil achievement and *the expectation is that the majority of pupils will move through the programmes of study at broadly the same pace.* (National Curriculum page 3).

To achieve fluency, reasoning and problem solving.

**Mastery is about keeping children together and not moving on at an over rapid pace.**

What about those who find  
Maths challenging and those  
who don't?

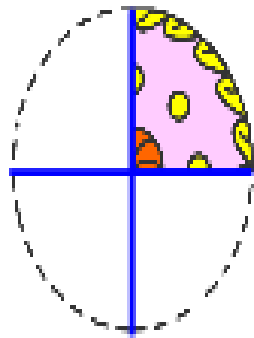
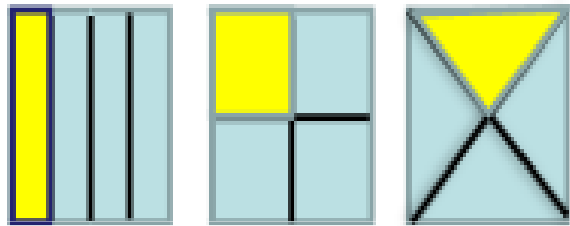
# Variation throughout the lesson and concepts

Conceptual variation how a problem is presented

## Conceptual variation when teaching fractions in Y2

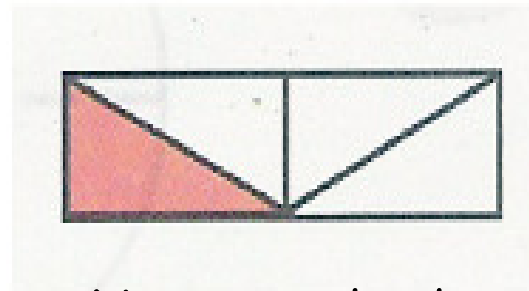
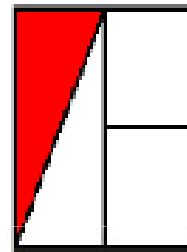
L.I- I can identify a quarter.

Stage 1



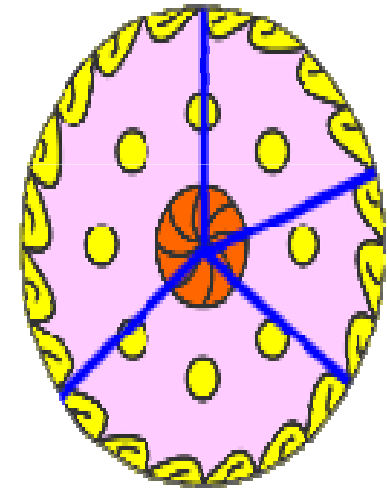
Standard Representation  
Objects divided into 4  
common representations

Stage 2



Non-Standard  
Representation  
Objects divided into 4  
un-common  
representations

Stage 3



Non-Concept  
Representation  
Often common  
misconceptions

# Maths tasks

*Task 1: Calculate. Task 2: Use the bar model to show that these statements are correct.*

1)  $\frac{3}{10} \times \frac{2}{3} =$

$$\frac{2}{3} \times \frac{1}{2} = \frac{2}{6}$$

$$\frac{1}{4} \times \frac{3}{5} = \frac{3}{20}$$

2)  $\frac{2}{4} \times \frac{1}{2} =$

1.

2.

3)  $\frac{3}{10} \times \frac{2}{4} =$

*Task 3:*

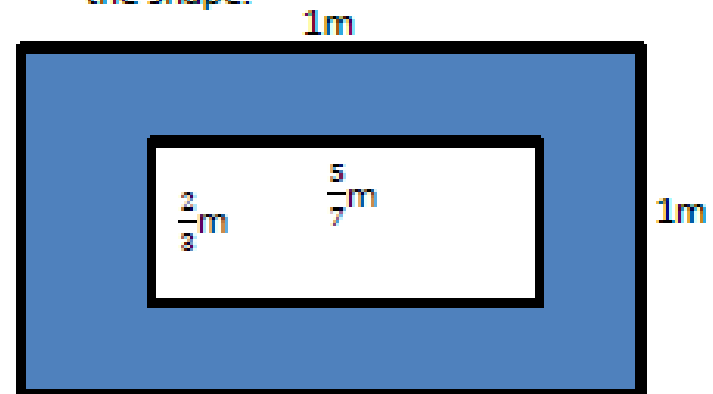
4)  $\frac{2}{5} \times \frac{2}{10} =$

The shaded square in the grid below is the answer to a multiplying fractions question. If that is the answer, what is the question?

■			

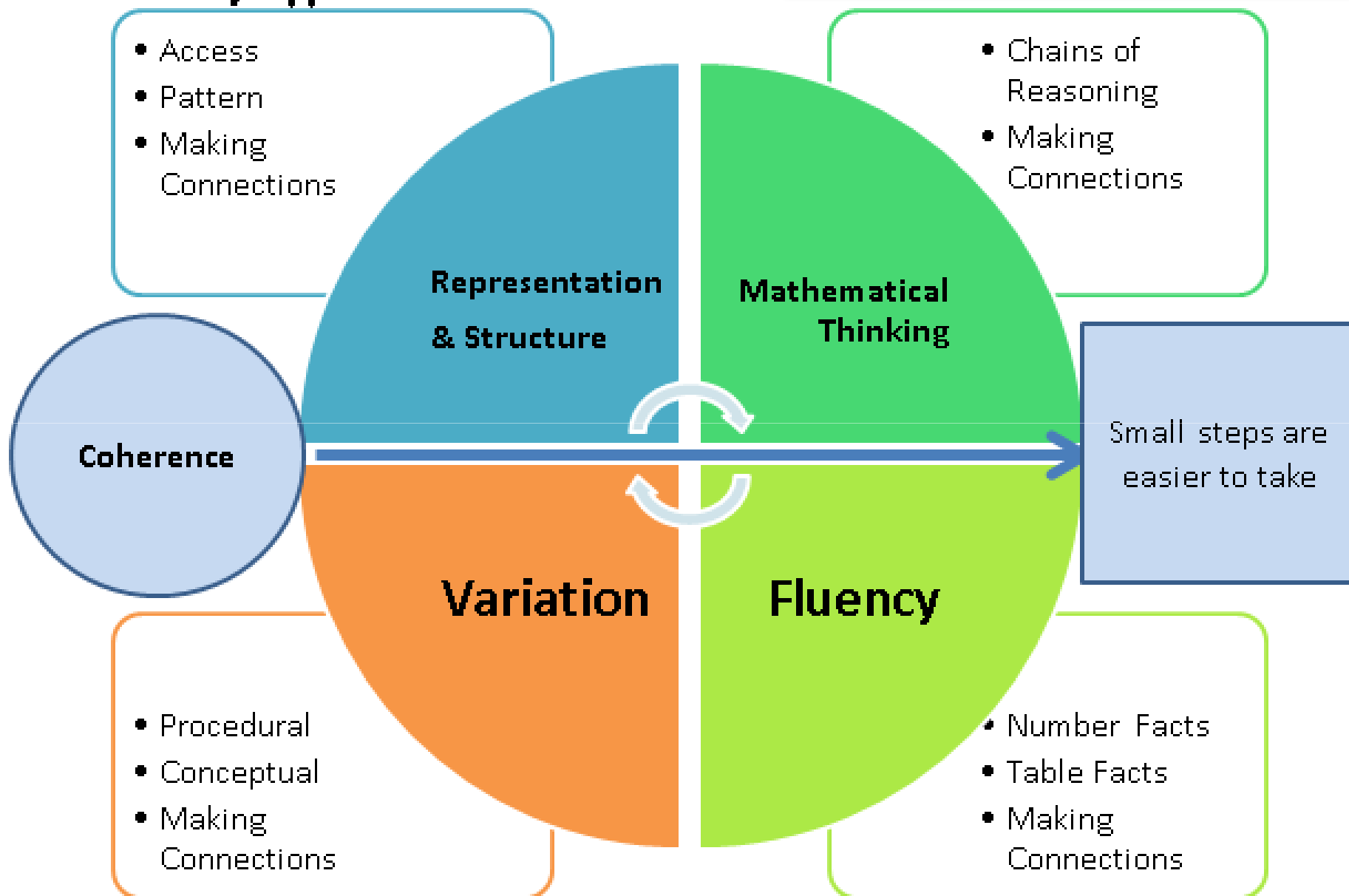
## Challenge Time!

- Find the area of the coloured part of the shape.





# Big ideas that run through a teaching for mastery approach



# What we've noticed...

- Times tables (2020 times tables test)
- Number skills
- Maths Bee



# What have we achieved so far?

- Fluency, reasoning and problem solving skills have improved
- Results have increased
- Children are confident



# What have we achieved so far?

- Shanghai teaching
- Ongoing teacher research group
- Visiting specialist training half-termly at Allfarthing
- Termly Maths training for staff
- Planning resources and school resources increasing

## **Focuses for this year:**

- Microscopic planning
- Procedural and conceptual variation

