Maths Parent Workshop – Wednesday 1st February

A mastery approach:

- a set of principles and beliefs. This includes a belief that all pupils are capable of understanding and doing mathematics, given sufficient time. Pupils are neither ‘born with the maths gene’ nor ‘just no good at maths’. With good teaching, appropriate resources, effort and a ‘can do’ attitude all children can achieve in and enjoy mathematics.

A mastery curriculum:

- one set of mathematical concepts and big ideas for all. All pupils need access to these concepts and ideas and to the rich connections between them. There is no such thing as ‘special needs mathematics’ or ‘gifted and talented mathematics’. Mathematics is mathematics and the key ideas and building blocks are important for everyone.

Teaching Maths EYFS

- Develop an understanding of maths through stories, songs, games and imaginative play
- Become comfortable with numbers and with ideas such as 'heavier than' or 'bigger' and other mathematical concepts
- Be aware of shapes and space
- We teach Maths following the 'White Rose Mastery' approach and 'NCTEM – Mastering Number'.

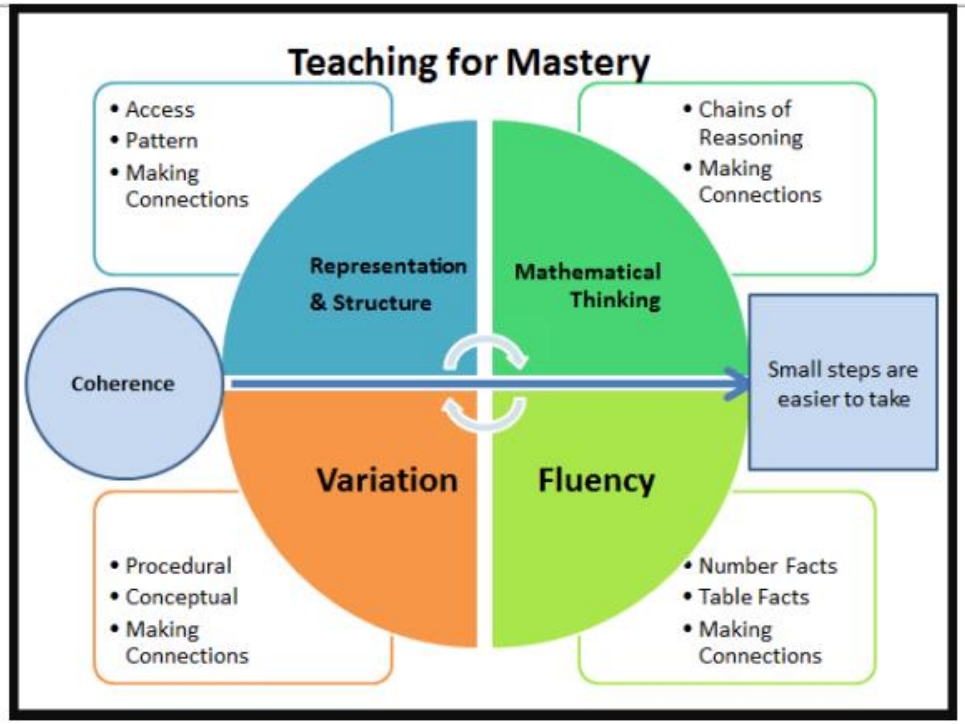
Teaching Maths KS1

- Daily mastering number sessions to develop quick recall of facts, in particular numbers to 100, number bonds to 10 and 20, counting in twos, fives and tens.
- Daily fluency sessions focussing on number and place value, addition, subtraction, multiplication, division and fractions.
- Daily sessions also allow children to practise the skills they are learning and to apply these skills in different ways, e.g. reasoning, problem solving, calculations involving missing numbers, true or false, explanations.

Teaching Maths KS2

- Daily Fluent in Five maths sessions to develop quick recall of facts, in particular times table and place value.
- Daily Rapid Reasoning sessions focussing on number and place value, addition, subtraction, multiplication, division and fractions.
- Daily maths sessions allow children to practise the skills they are learning and to apply these skills in different ways, e.g. problem solving, calculations involving missing numbers etc.

5 Big Ideas


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

5 Big Ideas

Coherence - Lessons are broken down into small connected steps that gradually unfold the concept, providing access for all children and leading to a generalisation of the concept and the ability to apply the concept to a range of contexts.

Representation and Structure - Representations used in lessons expose the mathematical structure being taught, the aim being that students can do the maths without recourse to the representation

Mathematical Thinking - If taught ideas are to be understood deeply, they must not merely be passively received but must be worked on by the student: thought about, reasoned with and discussed with others

Fluency - Quick and efficient recall of facts and procedures and the flexibility to move between different contexts and representations of mathematics

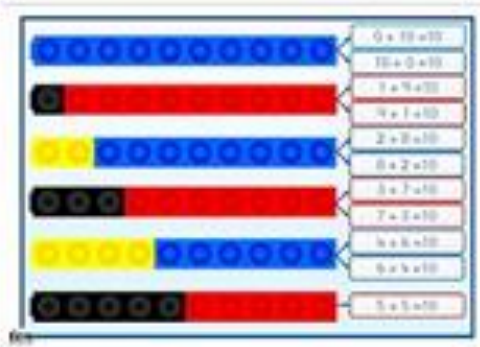
Variation - Variation is twofold. It is firstly about how the teacher represents the concept being taught, often in more than one way, to draw attention to critical aspects, and to develop deep and holistic understanding. It is also about the sequencing of the episodes, activities and exercises used within a lesson and follow up practice, paying attention to what is kept the same and what changes, to connect the mathematics and draw attention to mathematical relationships and structure.

Concrete

Pictorial

Abstract

2+2=4



10 + 0 = 10
9 + 1 = 10
8 + 2 = 10
7 + 3 = 10
6 + 4 = 10
5 + 5 = 10
4 + 6 = 10
3 + 7 = 10
2 + 8 = 10
1 + 9 = 10
0 + 10 =10

4 + 6 = 10

Arithmetic Questions – KS1

1.

33 + 10 =

Arithmetic Questions – KS1

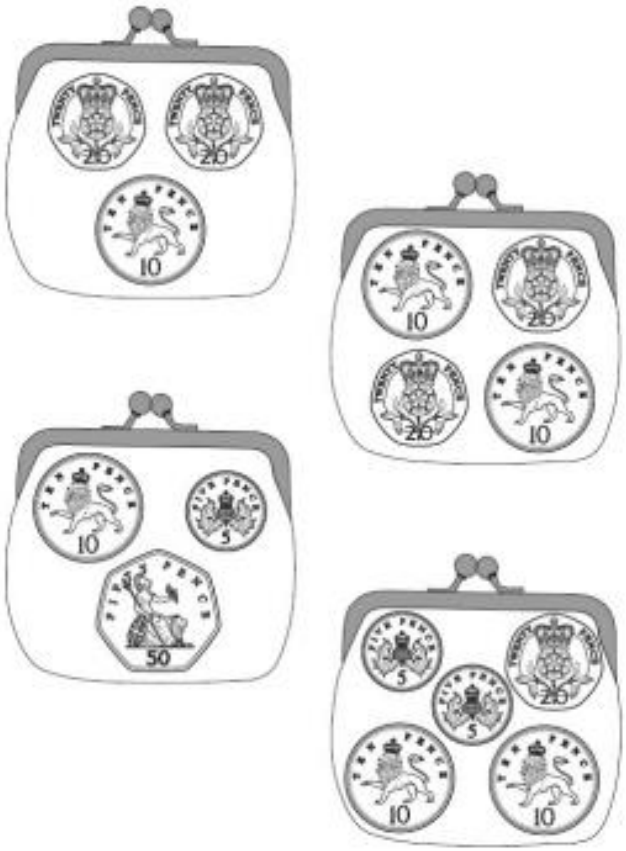
2.

$8 + \square + 4 = 17$

Reasoning Questions – KS1

1. **Two** of these purses have the **same amount** of money.

Tick them.

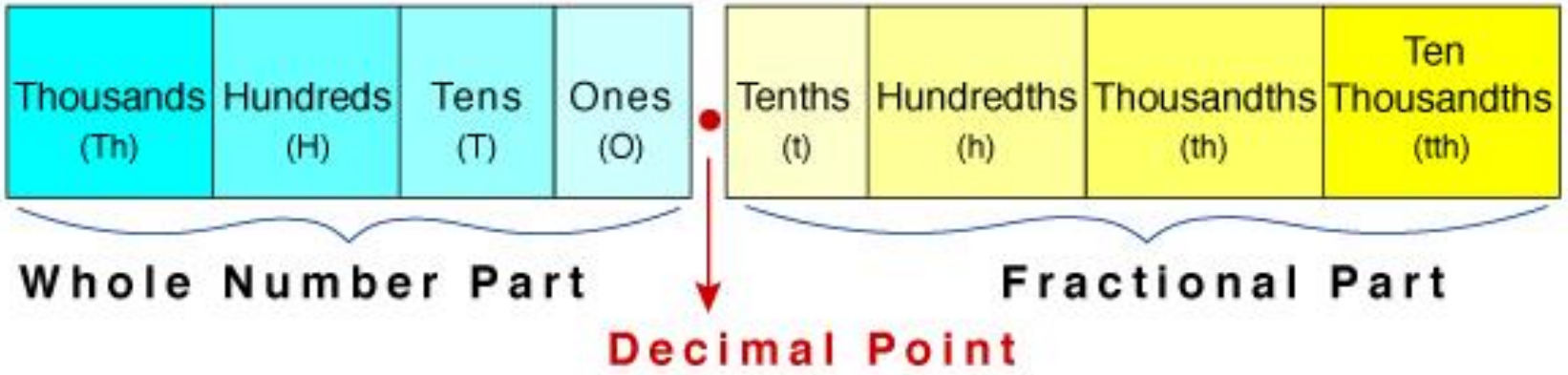


10,000	20,000	30,000	40,000	50,000
1000	2000	3000	4000	5000
100	200	300	400	500
1	2	3	4	5
0.1	0.2	0.3	0.4	0.5
0.01	0.02	0.03	0.04	0.05
0.001	0.002	0.003	0.004	0.005

Arithmetic Questions – KS2

Decimal Place Value

MATH MONKS



2.12 ÷ 10 =

1 mark

Reasoning Questions – KS2

Circle the number that is **10 times** greater than nine hundred and seven.

9,700 907 9,007 970 9,070

1 mark

Thank you for attending.

Are there any questions?