Maths Workshop – Upper Phase

Tuesday 7th March 2023

KILMORIE PRIMARY SCHOOL

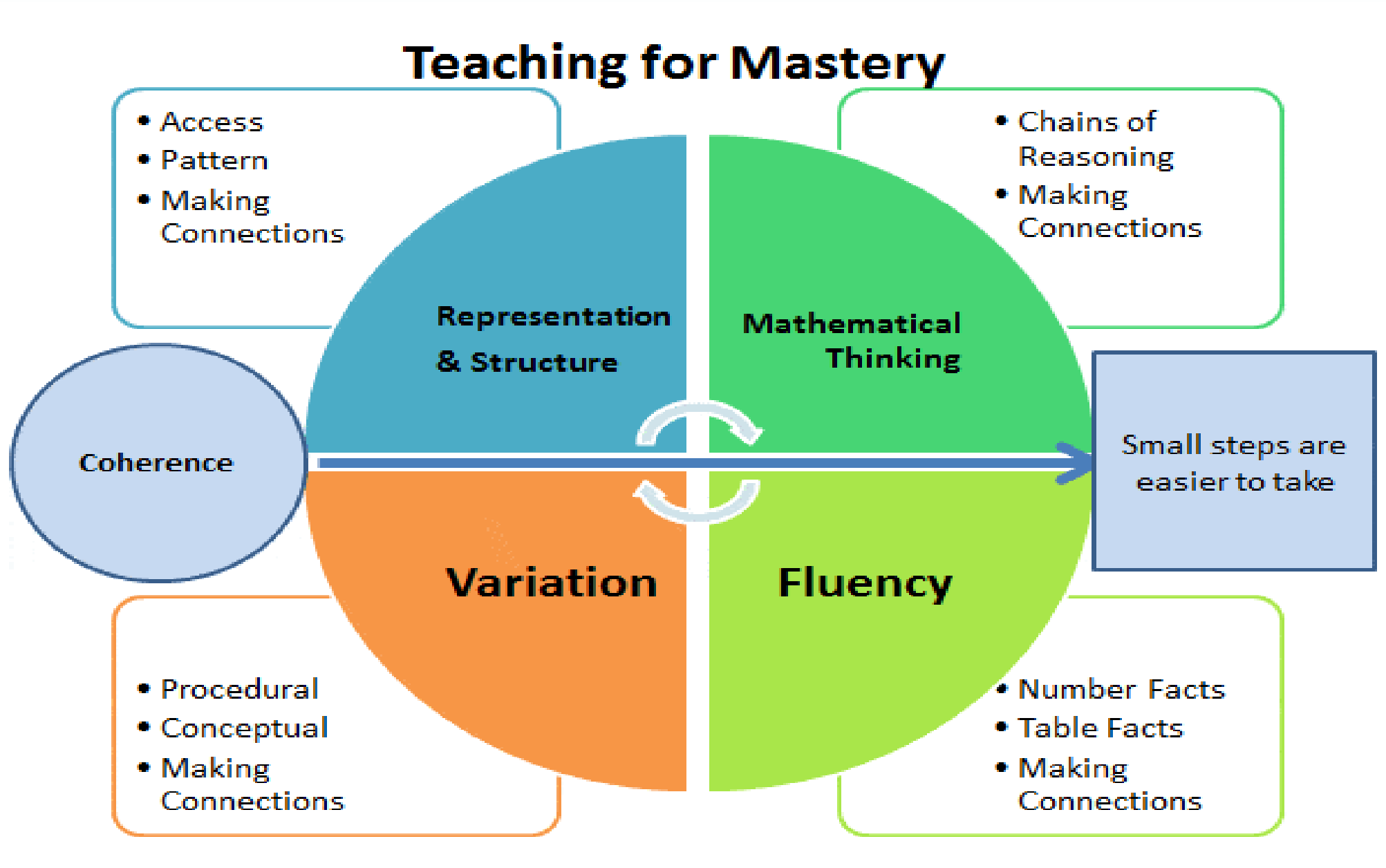
Aims

- To understand what your child need to be able to do mathematically as they move through the phase
- How we approach the teaching of mathematics
- What are the common areas of concern / misconceptions
- Things that you can do to support your child to build the key skills

Your child's mathematical learning journey

- Children begin their journey as mathematicians in Early Years. They use inside the classroom and the outside areas to explore what numbers mean using the counting principles. They listen to stories based around numbers and engage with the Numberblocks characters as they investigate numbers up to 5. They are encouraged to start reasoning and problem solving using mathematical talk.
- As they progress through the school, they continue to gain a deeper understanding of number and how different operations link to each other. They use a Concrete (objects) – Pictorial (drawings) – Abstract (formal methods) approach to learning new concepts which allows everyone to succeed and boosts confidence in explaining methods. Children are encouraged to use technical mathematical vocabulary from the start of their journey and to share what we have learnt with others.
- Classes mostly all work on the same objectives, with support for those who need it, and extra challenges for those who grasp something more quickly. Our hands on and practical approach aims to support children to get a love of maths and become life-long learners.
- It is best when Maths is seen as a building project. Each new thing that we learn builds upon something we have learnt before. As we learn more, our foundations become stronger and our building grows taller.

How do we teach mathematics?



Basic skills focus on developing mathematical fluency of key knowledge for each unit of maths. These key skills are taught through short, repetitive sequences of *counting* in different forms, *learning* by spotting patterns and making connections to known facts, and finally *applying* the skills in different contexts. By mastering this skills, children are then equipped with the freedom to explore more complex mathematical concepts confidently.

Problem solving skills are taught with the aim of not only preparing children to apply their mathematical skills in different contexts, but to also prepare them for challenges in their everyday life. By working creatively and collaboratively, trying different strategies and methods, our children develop the perseverance and resilience necessary for increasingly complex problem-solving. Through emphasising speaking and listening skills, we also encourage our children to focus on the process rather than the answer and to use precise and sophisticated mathematical language to explain and justify their solutions.

Curriculum Progression: At the beginning of the year, each year group teacher is given a long-term overview of the mathematics units for the year. This ensures all concepts are built on previous knowledge so that foundations are fully secure. Children spend longer on key mathematical concepts, most noticeably number. Significant time is spent developing deep knowledge of the key ideas that are needed to underpin future learning

KEY OBJECTIVES

CURRICULUM OVERVIEW

Common misconceptions / problems

- System based mathematicians
- Conceptual understanding (fractions, decimals, percentages)
- Times tables (recall and application)
- Strategies (ARE)

How can you help?

- ❑ Be familiar with the curriculum
- ❑ Use Kilmorie's calculation policy to support with methods
- ❑ Get your child to tell you what they already know / understand (give examples)

Activities at home – Yr4

- Use playing cards or bingo to practise times tables (Ace = 1, Jack =11, Queen = 12). Turn over two cards and multiply together.
- Use a clock, watch or phone showing analogue and digital time
- Make your own clock using card and butterfly clips (use Roman numerals in addition to standard numerals)
- Find clocks and buildings with Roman numerals
- Make cards with standard and Roman numerals – play a matching game.
- Look at variety of jugs that show ml/l – make cakes/smoothies, etc. to practise measuring
- Look at scales that show kg/g – make cakes to practise measuring
- Go shopping – work out totals, change, if one pack costs X how much do 3 cost?

Activities at home – Yr5

- Use coins to help with place value 10p = tens, 1p = units. So 3x10p and 4 x 1p = 34
- Use playing cards or bingo to practise times tables (Ace = 1, Jack =11, Queen = 12).
- Turn over two cards and multiply together.
- Use a clock, watch or phone showing analogue and digital time
- Make your own clock using card and butterfly clips (use Roman numerals in addition to standard numerals)
- Find clocks and buildings with Roman numerals; look at dates at the end of TV programmes
- Make cards with standard and Roman numerals – play a matching game.
- Look at variety of jugs that show ml/l – make cakes/smoothies, etc. to practise measuring
- Look at scales that show kg/g – make cakes to practise measuring
- Scale recipes up and down (e.g. this recipe makes 12 cakes, we need 6/24/36)
- Shopping – budgeting, looking at receipts; prices of packs of 6 vs packs of 4 or individual

Activities at home – Yr6

Year 6

- Use playing cards to practise times tables (Ace = 1, King = 10, Jack =11, Queen = 12).
- Turn over two cards and multiply together.
- Make a place value grid and practise moving numbers to the left/right to show multiplying/dividing by 10,100, 1000 etc.
- Make cards with fraction, decimal, percentage equivalents and play a matching game.
- Make cards with different decimal numbers – pick 3-5 and order – who can do it the fastest?
- Make cards with equivalent mixed numbers/improper fractions – play a matching game
- Look at variety of jugs that show ml/l – make cakes/smoothies, etc. to practise measuring
- Look at scales that show kg/g – make cakes to practise measuring Scale recipes up and down (e.g. this recipe makes 12 cakes, we need 24/36)
- Shopping – budgeting, looking at receipts; prices of packs of 6 vs packs of 4 or individual
- Read newspapers/magazines/websites to find data written in tables, graphs and charts, e.g. populations, footballers' wages, temperatures, etc.
- Practise using a protractor to measure angles.

Useful maths websites

These sites have an excellent range of activities and games for most topics.

TTRockstars – your child has a log in for this
https://ttrockstars.com/

Top Marks
https://www.topmarks.co.uk/maths-games/7-11-years/ordering-and-sequencing-numbers

Cool Maths 4 Kids – also includes lessons/explanations/brain teasers
http://www.coolmath4kids.com/

Maths is fun – a range of explanations and online activities
https://www.mathsisfun.com/numbers/index.html

Cool Maths Games
https://www.coolmathgames.com/

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Other useful websites

- Here are some great websites to help with all areas of Maths.
- https://www.timestables.co.uk/
- http://happysoft.org.uk/countdown/numgame.php
- https://nrich.maths.org/9086
- https://www.sumdog.com/
- https://www.transum.org/Software/Game/
- https://www.topmarks.co.uk/maths-games/3-5-years/counting
- https://www.topmarks.co.uk/maths-games/5-7-years/counting

What else would you Like support with?

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