St Luke's CE Approach to the Teaching of Mathematics

High-quality Inclusive Teaching (HIT) of maths, rooted in mastery principles, to develop deep conceptual understanding, fluency and confidence.

Mathematics Mastery Curriculum

- Committed approach to **Maths Mastery,** utilizing the *'5 Big Ideas'* of Mastery; **Representation / Coherence / Fluency / Thinking / Variation.**
- Underlying principles that *'everyone can be a mathematician'*; learning behaviours are taught; curriculum is coherent and sequenced. Teachers develop specialist mathmetical knowledge & skills.
- Foundations of the **White Rose Mathematics Scheme** from Nursery to Y6.
- *'Enhanced'* with resources and professional development from to **National Centre for Excellence in Teaching Mathematics (NCETM) / Turing Maths Hub / Oak Academy** to supplement and enhance the scheme.
- x5 1 hour lessons per week with between 3 – 5 Maths Fluency Lessons per week with *'Mastering Number'*.

Multiplication Tables Check (MTC)

- *'Times Tables Rock Stars'* used daily in school, and home, to build fluency and understanding in multiplication and division.
- Year 1 – 4 curriculum progression towards Year 4 MTC and continued practice in Year 5 & 6.
- Year 4/5 Catch Up Programme for children not passing / may struggle to pass the Y4 MTC.

Mastering Number

- Y1 – 5 Daily, 15-20 minute number fluency program to build confidence and enhance mathematical understanding.

Mental Arithmetic

- Mental Arithmetic Practice (MAP) by Anthony Reddy to form first 10 minutes of lessons. *Warm Up!*

Flashback 4/ Fluency

- Morning starters in class consolidate known mathematical concepts and check understanding.

Pre-Teach Lessons

- 15 minute *'pre-teach'* lessons supports engagement of lower attaining pupils with key vocabulary.

Lesson Design

- Lessons begin by linking to prior learning to build and secure understanding.
- CPA resources are carefully selected to develop deep understanding in all lessons.
- *'Practice is vital';* procedural fluency and conceptual understanding are developed in tandem. Number facts are taught to automaticity.
- Teachers use precise mathematical language and failing to grasp a concept is identified quickly.

Assessment & Monitoring

- **Century:** diagnostic assessment unit tests are used to identify gaps in learning before beginning a unit of work. This informs teacher planning and focus through the unit.
- **Progress in Understanding Maths Assessment (PUMA)** completed termly to monitor progress using Scaled Scores and identify children needing support.
- **White Rose Unit Tests** used to gather informative information about learned concepts.

Maths Journals

- All children show their mathmetical thining in workbooks and their maths journal

Fun & Enjoyment: *'a love of mathematics'*

- Times Tables Rock Star Certificates & recognition.
- Rock Star Maths Day (November)
- MAP maths games.

Intervention & Support

- **Year 3-5 Maths Intervention:** Success at Arithmetic - Number Sense 24 sessions in groups of 4.
- **Homework:** weekly practice of challenges linked to the learning in class.

Maths Across the Wider Curriculum

- Carefully planned maths skills across the curriculum

Some examples include:

Science: measuring time, weight, length and volume; estimating; calculating means and percentages; using negative numbers *(for example when taking temperatures);* representing data graphically; plotting and interpreting graphs, and using them to make predictions.

Design Technology: measuring during design and construction. Measuring amounts in cooking.

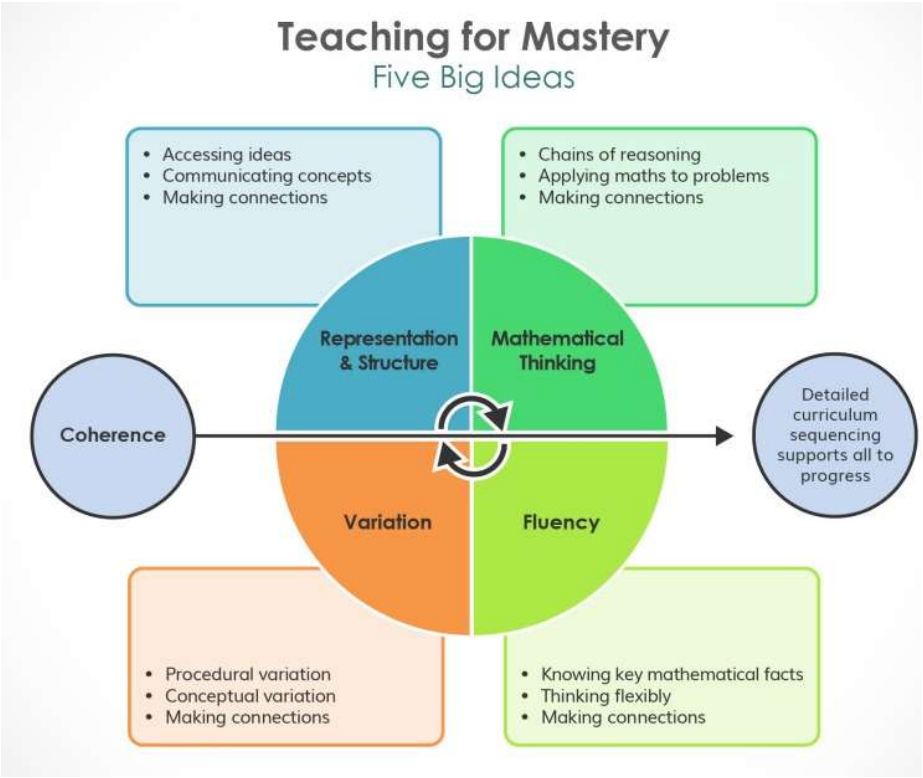
Geography: plotting and using co-ordinates, using and finding grid references, calculating distance: miles & km. Using large numbers when discussing populations.

History: calculating and understanding dates and times, reinforcing understanding of larger numbers.

Parental Engagement

- Maths Workshops.
- Parent Conference input.
- Home access to TTRS.

Mastery Curriculum | **Assessment** | **Wider Curriculum** | **Intervention** | **Parental Engagement**


Teaching for Mastery
Five Big Ideas
• Accessing ideas
• Communicating concepts
• Making connections
• Chains of reasoning
• Applying maths to problems
• Making connections
Representation & Structure
Mathematical Thinking
Coherence
Detailed curriculum sequencing supports all to progress
Variation
Fluency
• Procedural variation
• Conceptual variation
• Making connections
• Knowing key mathematical facts
• Thinking flexibly
• Making connections