**MPS Maths: Teaching for Mastery**

Key concepts for pedagogy:

* Fluency

\*how is this embedded in planning?

* Variation
* Visualisation
* Providing proof of reasoning
* Number sense: noticing structure, connections & patterns

Key questions & prompts:

* Think of a story...
* How do you know?
* Show me another way...
* Can you imagine? Can you see?

\*how is questioning used to develop reasoning?

* Always, Sometimes, Never?
* What’s the same, what’s different?
* Which way is better?
* Spot the mistake...

Types of knowledge pursued:

* Factual (‘conventional’)): *I know what*

\*how are these balanced?

* Procedural (instrumental’): *I know how*
* Conceptual (‘relational’): *I know why*

Key features of a MPS classroom:

* CPA (Concrete => Pictorial => Abstract) approach

\*what does a typical lesson look like?

* Manipulatives used regularly and effectively
* Whole class & mixed ability teaching
* Precise & specific vocabulary

Planning:

* Questioning

\*what do I want the students to learn?

\*how can I tell if they have learnt it?

\*what if they cannot learn it?

\*what if they can already?

* Identify existing knowledge
* Identify key new knowledge
* Identify difficult points
* Incremental delivery: step by step
* Anticipate mistakes/misconceptions
* Consider pre-teaching
* Differentiation through scaffolding

Assessment:

* Formative: timely feedback & regular ‘keep-up’ sessions
* Runway model: readiness for take-off / turbulence...

\*how are target children identified?

\*how are struggling learners addressed?

* Summative: analysis of gaps
* Non-Negotiables

Potential limitations:

* Pitch & pace: elongated tail...
* Growth mindset: high expectations for all
* Search for THE answer => search for AN answer (divergent thinking)
* MNP: high-quality textbook pedagogy & logistics