## Maths No Problem: A Mastery Approach.

A visitors guide to Maths at Chandlers Field

## **Explore** esso Explo I counted 362 lolly sticks. -----100 100 telly sticks hat do each of the digits in 362 stand for? Journal work Master Structure Ihave 3 packs of 100 sticks, 6 packs of 10 sticks and 2 single sticks. 100 10 10 10 10 2-4 ndreds tens ones 3 6 2 300 60 2 362 = 3 hundreds + 6 tens + 2 ones 362 = 300 + 60 + 2

**Explore** - Each lesson begins with an 'In Focus' task (with **real life application** where appropriate). Children often work in groups using **concrete** materials where necessary to solve the problem. The teacher then facilitates as the children share their methods, using *questioning* to challenge, address misconceptions and move learning forward.

Journals - Opportunities for children to record their work at an age appropriate level. Journals are used as a free space where children can **explore and develop** their **understanding** at various levels. The class teacher will use questioning with individual children to assess understanding and provide challenge by using different types of journal. **Concrete Pictorial Abstract (CPA) Approach** means pupils learn new concepts initially using concrete examples, such as counters, then progress to pictorial representations before finally using more abstract symbols, such as the equals sign and other mathematical notation.

**Master**-The class 'enter the textbook' to look at various methods in more detail to solve the problem. The questions and examples are carefully varied by expert authors to encourage pupils to think about the maths. Rather than provide mechanical repetition, the examples are designed to **deepen pupils' understanding** and **reveal misconceptions**.

**Guided Practice** – An opportunity for children to apply what we have learnt so far in the lesson through paired talk and teacher guidance. We answer questions that change slightly and are asked how they are similar or different. A further opportunity for the teacher to assess children's understanding.



Workbook - When ready, children work independently in workbooks. Differentiated tasks and activities are designed to be easy for pupils to enter while still containing challenging components. For advanced learners, the textbooks also contain non-routine questions for pupils to develop their higher-order thinking skills.

**Challenge** - This can be used after the guided practice and/or the workbook. **Problem Solving** activities are designed to be taught using problem-solving approaches to encourage pupils' higher-level thinking. The focus is on working with pupils' core competencies, building on what they know to develop their relational understanding. The children may also be asked to revisit and be challenged in their journaling.

Journalling allows children to explain, convince, and justify their responses. Teachers plan when is the best time in a lesson for children to use journalling.