

MATHS AT HARTEST C.E. PRIMARY SCHOOL 2023-24 MATHS MASTERY APPROACH

At Hartest CE Primary we believe all children can do Maths and through a Mastery approach aim to show children that Maths is an investigative and subject with many links. A Mastery approach supports the development of learning of all pupils together. Most mixed age classes will be taught the same concept at the same time although on occasions this may be separate. Children will work as a whole class, in small groups and in mixed ability pairs. It is expected that 'talk' plays a significant part in Maths lessons with children expected to explain their thinking and to prove it. This is done through a whole school **A.P.E. approach**. A = Answer (I think...), P = Prove (because...), E = Example (for example... *including the working*). This is encouraged (in all year groups) both verbally in pupil responses in class as well as in their written answers to reasoning and problem solving questions.

Although the teacher led Mastery approach is taught as whole class without differentiation, **challenge for the more able occurs through 'Dive Deeper' extension activities** in every lesson. For pupils who do not meet the learning objective, a **same day intervention** is given in the plenary or immediately after the lesson – this is identified in books with 'TA Intervention'.

Hartest CE Primary has been working alongside the Suffolk Maths Hub in the past two years and will continue to work on 'Embedding Mastery' programme this academic year. Teachers and TA's received training via Chris Gallagher (arranged by the MAT) focusing on Maths Mastery. **Cross curricular opportunities:** Every term our school carries out a maths day where all classes work on a maths related project linked to the class topic being taught. This ensures that pupils understand the importance of maths and are able to apply their maths skills in all subjects.

All classrooms have resources to support learning through a practical approach to teaching maths as part of an overall focus on teaching maths through the **Concrete, Pictorial and Abstract concept (CPA)**.

Teacher's use the long term plan taken from the **White Rose planning** and adapt this to meet the needs of their class whilst ensuring full coverage. Teacher's use the White Rose planning to guide their teaching of the blocks of learning with reference to the learning objectives for each year group for the National Curriculum and with awareness of the content of the National framework for Maths in Year 2 and Yr 6.

Teacher's may use resources from the 'small steps' **White Rose planning** as well as **Third Space Learning, NCETM and NRICH investigations**. Reasoning and problem solving is linked to each block using **Maths No Problem** workbooks, **'I See Maths'** and **'I see Problem Solving'**. **Maths Concept Cartoons and Maths Eyes** resources are also used for reasoning. For fluency, **Target Your Maths** workbooks are used.

Teacher's are aware that pupils should experience fluency, reasoning and problem solving within a block of learning. A **topic sequence** for Y2- Y6 is as follows:

- **Session 1:** Diagnostic assessment (Cold task) to identify gaps.
- **Session 2:** Mastery lesson – reasoning and problem solving based. Lessons are taught using mastery style PowerPoint.
- **Session 3:** Consolidation lesson – fluency based lesson linked to previous lesson.
- **Session 4:** Mastery Lesson
- **Session 5:** Consolidation lesson – fluency based.

This sequence is repeated to the end of the topic. The penultimate lesson is a 'recap/revision' lesson, which usually takes the form of a carousel. The final session is a 'hot task' assessment of the topic. There may also be a 'hot task follow up' session depending on results from the hot task in order to ensure all pupils meet objectives covered.

Next step feedback is given to pupils throughout the week in order to either consolidate learning of the previous lesson or to **challenge pupils** – this can take the form of extension reasoning questions. Pupils respond in purple pen.

EYFS and Year 1 Mastery approach: A practical approach is used to teach maths. The concept of number and calculation is our main focus in order to embed confident use of number and a solid foundation. We use subitizing, 5s and 10s frames, games and manipulatives to ensure pupils apply their understanding. In EYFS, a number is focused on each week where pupils will be immersed in the number through focused activities, games, CPA, mark making and role play.

Teachers and teaching assistants guide children's developing Maths knowledge and skills through careful questioning enabling children to conjecture, explore and develop their mathematical thinking. Children are encouraged to see Maths as a subject where links can be made, patterns can be found and developed and fluency skills support the development of mastery skills. The school's calculation policy shows progression across the year groups from EYFS to Year 6. This is displayed in each classroom.

Assessment: Cold and Hot tasks carried out for every topic – assessment findings inputted into Target Tracker. Reasoning tests carried out every term in every year group.