Maths at St Peter's - Teaching for Mastery

Our aim is for **all** children to **enjoy maths** and have a **secure and deep understanding** of fundamental mathematical concepts and procedures when they leave us to go to secondary school.

The children are taught to become fluent in the fundamentals of mathematics; reason mathematically using mathematical language and apply their knowledge and understanding to problem solving tasks.

What does Teaching for Mastery mean?

• It is achievable for all – we have high expectations and encourage a positive 'can do' mindset. Learning is carefully scaffolded so everyone can progress. This may include providing sentence stems such as '10 is made of __ and __' or using cubes to physically find different ways of making 10. If a child struggles to grasp a concept, gaps are addressed to prevent them falling behind.

• Challenge through greater depth - teachers set tasks to deepen knowledge and improve reasoning skills

• Deep and sustainable learning – lessons are designed with careful small steps. For example, in Year 1 then learn to recognise equal groups and then progress onto adding equal groups. Precise questions such as 'What's the same? What's different? What do you notice?' encourage children to explain their thinking. They are taught through whole-class interactive teaching where a 'ping-pong' approach is used (teacher models, they do together, they do independently, repeat).

• The ability to build on something that has already been mastered – children's learning of concepts builds on previous learning. For example, in year 2 they compare and order number from 0-100 which prepares them for comparing and order numbers up to 1,000 in year 3.

• The ability to reason and make connections – children are encouraged to make connections, such as, if I know 4 + 2 = 6 then 40 + 20 must equal 60, and spot patterns e.g. all multiples of 5 end in a 5 or 0. When doing so they are taught to use precise mathematical language such as total, multiple and equal.

• Fluency – teachers change the context of the maths (e.g. to work out 5+2=7 they may use objects such as cubes, use pictorial representations by drawing the cubes and then move to just writing the equation 5+2=7. This knowledge is then used to solve word problems like *'I have 5 red pens and 2 blue pens. How many do I have in total?'*). There are high expectations for children to learn times tables and key number facts such as numbers that make 10 (so they are automatic).

• Problem solving is central – this develops pupils' understanding of why something works

"You know you've mastered something when you can apply it to a totally new problem in an unfamiliar situation." Dr. Helen Drury, Director of Mathematics Mastery