Shorne Church of England Primary School

Growing Together in Learning and Faith

Mathematics Mastery

The way we teach mathematics at Shorne C of E Primary School has been altered since September 2016. The Mathematics Mastery curriculum has been developed over a period of time by Ark schools. Ark are a group of schools who have worked together to develop teaching methods and a curriculum based on international evidence and have tailored these to UK schools. The programme draws significantly from the curricular principles of Singapore, one of the consistently high performing nations within the field of mathematics education over the past 30 years. Maths Mastery meets the requirements of both the current and the new 2014 National Curriculum for Mathematics. In September 2016, we were successfully chosen to become a national pioneer, rolling out Mathematics Mastery in Reception and Year 1, with the principles being applied in all year groups. It underpins the commitment we have to raising standards and attainment throughout the school, so that every child achieves excellence in maths.

The way we teach mathematics at Shorne C of E Church of England Primary School has altered slightly since September 2015. In May 2015, we were successfully chosen to become a national pioneer, rolling out Mathematics Mastery in Reception and Year 1, with the principles being applied in all year groups. It underpins the commitment we have to raising standards and attainment throughout the school, so that every child achieves excellence in maths.

The Mathematics Mastery curriculum has been developed over a period of time. Mathematics Mastery is a non-profit organisation developed by ARK Schools to meet their aspiration of success for every child. Mathematics leaders and teachers, within the network, work together to develop a curriculum that meets this high aspiration and this collaboration now extends to schools such as Shorne C of E. The ARK Schools have a mission to address educational disadvantage, especially in mathematics. The programme takes the tried and tested approaches that successful teachers, departments and schools have been using for a number of years. What is special about this new approach is that it brings all of these approaches and techniques together in a rigorous and systematic structure.

The Mathematics Mastery curriculum has been developed to ensure that every child can achieve excellence in mathematics. Providing children with a deep understanding of the subject through concrete, pictorial and abstract approaches to ensure pupils fully understand what they are learning and why.

The key features of our approach results in all staff having high expectations for every child; teaching fewer topics but with greater depth; ensuring number-sense and place value are taught first to give solid foundations to build upon; a research-based curriculum where objects and pictures are always before numbers and letters and problem solving is central so children can calculate with confidence, understanding why it works!

The approach places emphasis on the cumulative mastery of essential knowledge and skills in mathematics. It embeds deeper understanding of maths by utilising a concrete, pictorial, abstract approach so that pupils understand what they are doing rather than just learning to repeat routines without grasping what is happening.

The assessment of each child is continuous, from the beginning of every lesson, teaching staff assess what the pupils are, and are not, understanding and use this to scaffold each segment of the lesson. Interventions are both planned for a dealt with 'live', meaning that misconceptions are dealt with immediately and high attaining pupils are challenged appropriately. The lessons is split into 6 integral sections, and the transitions between these is managed with children singing, chanting and reciting number facts so that this is further embedded, fun to learn and means no time is wasted during lessons.

Aside from the maths lessons, Maths Meetings are an exciting new development, where children sing, chant, play games and undertake activities that pre-teach mathematical concepts as well as embedding newly learnt skills and practicing ones that require quick fire responses. This ensures children are able to respond quickly to mental arithmetic style questions as well as being able to have this knowledge at their fingertips in order to solve deeper questions and sophisticated problems.

We firmly believe that every child has the ability to achieve excellence in mathematics – there is no 'maths gene', if you practice and apply yourself you can achieve.