Maths Education Event - Tuesday 7th November 2023

We are delighted that you have come along this evening to gain an insight into how Maths is taught and developed at St. Christopher's The Hall School. Myself and Mrs Morris lead the Maths' curriculum as part of the STEM Team, as well as teaching our own classes. I teach in Year 6 and Mrs Morris teaches in Year 4.

Maths as a subject is broken into several key strands to aid with its teaching: Number (which incorporates Place Value and calculation), Measures (incorporating length, mass, volume, time and temperature), Geometry (2D and 3D shapes) and Statistics (Charts, graphs and understanding data). Within each of these strands, there are further sub categories - for example with Calculations, we teach effective methods for adding, subtracting, multiplying and division, which helps the children grasp concepts including fractions, decimals and percentages. Developing a variety of methods enables children to select a strategy that they feel comfortable with. Very rarely do we all work out a question in the same way so our pupils need to have their own 'tool box' that they can select appropriately from.

At St. Christopher's, we believe that one of the single most important concepts that can help your children access the broader curriculum is their acquisition of times tables. From this, children can apply their knowledge to have varied fluency when calculating complex written multiplication methods, division, converting fractions to decimals to percentages, mean, mode, median, algebra and most areas of mathematics. It is comparable to having a key which opens the doorway to mathematical confidence and competence.
It is important that the learning of times tables isn't just a rote learning of times tables in sequence. For example, 1 x 7 = 7, 2 x 7 = 14, 3 x 7 = 21. This does not allow for engagement and a full understanding of the times tables. Pupils are taught to have mastery of their multiplication knowledge and be able to manipulate facts. For example, answer questions out of sequence, if you know that 2 x 4 = 8, how do we work out what 4 x 4 and 8 x 4 is, family of facts, 20 x 40, 8 divided by 2.

This is why in Year 4, in line with state schools, we are setting the Multiplication Tables Check (MTC) in May and will continue to do so each year. The focus with times tables begins in Year 2, where the children are hoped to have mastery in the x2, x5 and x10 tables. In Year 3, this will progress to focus on x3, x4 and x8. By Year 4, we hope to consolidate their entire knowledge up to 12 x 12. It is vital that our pupils know their times tables and the associated division facts.

We can devote teaching time to cover this knowledge during our mental starters and main lessons, as well as set home learning using engaging forums, such as Times Table Rock Stars and Sumdog. However, we need you. We know that by having the support of parents, we can offer your children the best chance to embed this knowledge and begin Year 5 with the key competencies to tackle the demands of more complex mathematics and the confidence to enjoy their Maths learning.

At all levels through a child's learning journey in Maths at St Christopher's, there is emphasis on developing competency with Varied Fluency / Calculation confidence and then apply this to Reasoning Problem Solving / Word Problems, with a developed Mastery in Maths.
By using the **C - P - A** approach, we aim to support and stretch children so they achieve a sense of challenge in all their Maths learning and enjoy their achievements.
C stands for Concrete - using tactile and practical resources objects to help develop their understanding which could be through the use of cubes, counters and Numicon for example.
This progresses to **P - Pictorial**, using visual stimuli which helps embed their understanding, such as part whole models and the Bar method.
Finally we strive towards teaching using **A - Abstract**. This focuses more on the type of mathematics we would have experienced in school, and this is more number based and strives to teach using the abstract concept of numbers. It is vital that children understand the concrete and pictorial concepts before embracing the abstract as advancing too quickly can hinder their understanding.

The teaching approach used at St Christopher's has been carefully planned in terms of progression through our Calculation Policy which is available on the school website. It aims to guide teaching to ensure all aspects of the curriculum, from Reception to Year 6, is covered and delivered in order to support, as well as stretch learners. By stretch, this means using and applying with a mastery approach within their own year group's curriculum content rather than progressing to the next year's work early. Whilst our Calculation Policy was compiled in line with DfE guidance, The White Rose Education resource and the Pearsons Power Maths scheme we have adapted this slightly to take into account the fact we need to cater for a considerable amount of our pupils taking the 11+. It encourages the development of vocabulary.

It is standard practice in schools to use formative and summative means to understand what knowledge your children possess and what we need to teach in order for them to achieve progression and success. We use:

Formative assessment to see what your child understands on a daily basis which informs planning, next steps, activities and differentiation (support and challenge)

- Assessment for Learning (AfL) in every lesson as part of our teaching approach.
- In class targeting questioning which you will experience during the taster lessons.

Summative

- Termly assessment (on paper and online covering the units that have been taught) to gain an overview of your child's independent application of knowledge and skills using calculation and application in reasoning word problems.
- Topic specific informal assessments, at the end of each unit to gauge what your child has learnt. The results of this are built into future planning, ensuring that each lesson is tailored to your children's needs.

We are lucky to have five Maths lessons each week, as well as the opportunity to set targeted home learning. Children are well supported in lessons by the class teachers, teaching assistants and where appropriate additional supporting adults, such as Mr Carter, Mrs Wanstall and Mrs West. Careful consideration has been given to how we use the available adults to maximise all available resources.

As a school, we have invested in the White Rose Scheme of work which offers a brilliant range of varied fluency and reasoning problem solving activities, as well as suggested guidance for the sequence of learning which we use to inform our teaching and learning. In addition to this, we use Power Maths, Classroom Secrets, Testbase, Times Table Rock Stars and Sumdog, to name a few of the resources that we find are effective in helping us deliver our best teaching.

Each teaching sequence lasts over a course of a couple of weeks on average. This aims again to build on your child's varied fluency, reasoning problem solving and mastery of the various strands in mathematics. The teaching sequences build on the skills taught in previous units so there is the opportunity to revisit and embed learning as we progress throughout the year; for example rounding skills will be covered in a place value unit before we tackle estimating in a subsequent addition and subtraction unit.

We hope this quick introduction to how Maths is taught at St Christopher's helps your understanding of how Maths teaching has evolved since you may have been at school and we aim to continue this journey, with the focus always being your children and their enjoyment, achievement and successes in mathematics.

We would like to invite you all now to experience a series of Maths lessons, condensed for the purpose of this evening. Please get involved as much as possible and try to see it from your child's point of view.