Mathematics

At Christ Church CE Primary we use Maths No Problem as a basis for our teaching of Mathematics. Our aims are to fulfil the requirements of the National Curriculum for Maths; our pupils are taught to become fluent in the fundamentals of mathematics, reason mathematically and become problem solvers. Pupils are also provided with a teaching of maths for mastery in order to further develop their fluency and they are given the opportunity to think deeply about the maths concepts they are immersed in.

Intent

At Christ Church, we aim to teach pupils to master many mathematical concepts. Pupils are moved through the topics broadly at the same pace to build self-confidence and resilience in all pupils. Our aim is for our pupils' knowledge to be built upon throughout the year groups; expanding on concepts that are introduced in year 1, immersing them in a depth of mathematical vocabulary and ideas so that they can begin to master mathematical concepts. We give the pupils plenty of opportunities to build upon their problem-solving skills and teach them to be able to articulate their mathematical thinking using the correct terminology. We want our children to enjoy learning about maths and instinctively make connections between the maths they are learning in the classroom and real-life mathematical experiences that they encounter.

Implementation

In ensuring high standards of teaching and learning in Maths, we have implemented the Maths No Problem approach to our teaching.

Maths is taught daily, focusing on knowledge and skills stated in the National Curriculum alongside the MNP method which encourages pupils to master mathematic concepts through a concrete, pictorial and abstract approach. This allows our pupils to engage in a hands-on learning experience using concrete apparatus before moving on to creating pictorial representations for mathematical concepts. We believe this allows our pupils to gain a deep understanding before moving on to the abstract method, using numbers, symbols and formal methods to solve mathematical problems. The MNP technique follows this same structure from years 1 – 6, ensuring that the structure of the lessons becomes familiar to all pupils.

Mathematic vocabulary is at the centre of all of our maths lessons; the children learn to articulate their mathematical reasoning through the 'In Focus' and 'Let's Learn' part of the lesson, explaining their responses to their peers and using the language of a mathematician. The MNP approach is differentiated through depth rather than acceleration and therefore, within lessons, children are challenged to explain their thinking and reasoning to adults and peers to help them gain a deeper level of understanding. They are encouraged to find multiple methods to demonstrate their comprehension of the topic.

Children who are not sufficiently fluent are provided with additional support to consolidate their understanding before moving on. Same day interventions are provided so that all learners are able to participate in each lesson as the topic is explored. Within lessons, teachers and teaching assistants

target those children who may need extra support to enable them to achieve age related expectations where appropriate.

Our advanced learners are challenged with rich and sophisticated problems throughout the topic. These challenges are taken from various sources such as White Rose Maths Hub and Nrich to ensure our children are immersed in a variety of problems.

Outside of MNP, times tables are taught daily to allow our children to become fluent in their ability to recall multiplication facts; this is implemented through a range of activities such as games, competitions and colouring Basic skills lessons are also used to allow children to consolidate their learning and understanding of the methods taught and our children are also given problem solving opportunities outside of MNP to immerse them in a wide range of questions. To encourage children to practise their times tables at home, we use Times Tables Rock Stars. With this website, children can advance at their own pace through the multiplication questions. We have also implemented a reward system for children regularly accessing TT Rock Stars at home to further encourage our pupils to learn their times tables.

Impact

The impact and measure of this is to ensure that children at Christ Church are equipped with the fundamental mathematical skills that will enable them to progress through KS3 and apply their knowledge to real life scenarios.

The percentage of children at Christ Church achieving the age-related expectations or above will be at least in line with the national average and there will be no significant gaps in the progress of different groups of children such as disadvantaged versus non disadvantaged.

We intend for our children to become resilient and confident mathematicians through a focused approach which allows pupils to really understand, and begin to master, mathematical concepts.