

Maths Curriculum Intent

Rationale

Mathematics is essential to everyday life. Therefore, at Shirley Warren Primary School, our intent is to provide an understanding of the world, the ability to reason mathematically, and a sense of enjoyment and curiosity about the subject allowing them to solve problems. Consequently, our aim is to ensure that children build upon their fluency, reasoning and problem solving skills across all domains of the National curriculum.

Commented [1]: Matt - Shall we move "CPA approach" into the implementation section as it falls into this area.

Intent

At Shirley Warren there are four key focus aims that underpin the teaching and concepts that are developed year upon year.

- Children become mathematicians in their lessons demonstrating Independence, Resilience and Perseverance
- Class groupings to follow teaching approach across the school: Cutaway groups will be based on AfL with children flexibly grouped on a regular basis.
- Mathematical discussion to occur throughout the lesson between children and guided with an adult
- Children demonstrate their understanding through multiple approaches (resources) and through a variety of contexts.

Implementation

Mathematics at Shirley Warren is carefully structured to challenge each child based on their current attainment. We follow the NCETM (National Centre for Excellence in the Teaching of Mathematics) Programme of Study, which outlines a series of steps within mathematical domains to facilitate progression and development in children's current abilities.

At the outset of each unit, children undergo a pre-assessment to determine their starting point on the learning journey. Subsequently, they navigate through a series of steps that incrementally increase in difficulty. Throughout the sessions, children are encouraged to work independently and engage in collaborative learning with peers who are on the same step.

During each session, students meet with their class teacher and class teaching assistant for guidance, with modelling and scaffolding employed through various images and questions. The models presented are directly linked to the tasks, fostering success for the children. When working independently, students are urged

to tackle mathematical questions using a diverse range of resources such as number lines, Numicon, dienes, place value counters, and other age-appropriate apparatus.

Groupings remain flexible as children progress at different rates. Continuous assessment occurs during and after lessons to determine if students are confident and proficient enough to move on to the next step. Formative assessments are integrated into lessons, aiding teachers in identifying and addressing any need for additional support or correction of misconceptions. This approach aligns with the live marking policy, wherein teachers continually assess children's learning, utilising it to enhance their teaching strategies.

In Year R, the Early Number Sense programme is employed. Comprising 95 teaching animations, this program initiates whole-class number sense discussions, aiming to instil a deep understanding of quantity and numbers up to 10. It covers all the number elements of the 2021 statutory framework, excluding counting, and aligns with the assessment of Early Learning Goals for Number and Numerical Patterns.

As a school, we adopt a Concrete, Pictorial, Abstract (CPA) approach to teaching new concepts, ensuring that all pupils can access mathematical learning.

To reinforce fluency and recall of current knowledge, all students participate in Brain Boosting Maths, conducted 4 to 5 times a week. This initiative comprises five slides focusing on time, multiplication, reasoning, four operations, and retrieval from previous learning. These slides are reiterated daily over a week or two, contributing to the development of children's fluency and understanding.

CPA approach

We use the Concrete, Pictorial, Abstract (CPA) approach is a teaching method in maths that starts with using physical objects (Concrete), then progresses to visual representations (Pictorial), and finally moves to abstract symbols and notation (Abstract). It helps students build a strong and lasting understanding of mathematical concepts by gradually transitioning from hands-on experiences to visual aids and then to symbolic representations. This approach accommodates different learning styles and ensures a comprehensive learning experience, especially in the early stages of mathematical education.

We also use TimesTable Rockstars in order to support recall of times tables.

Further resources used:

Whole school Overview	Year group maps	Progression of Mathematical domains
Number Sense program	Vocabulary documents	Learning Journey Master
NCETM Prioritisation	Times Table Rock Stars	Assessment Trackers

Impact

Our curriculum builds on foundational knowledge, fostering a progression where children acquire, apply, and retain deeper understanding. We integrate problem-solving questions into our structured steps and whole-class exercises to encourage collaborative learning.

In each lesson, children develop their love for mathematics, refine skills, deepen their understanding of numbers, grasp practical applications, and build resilience. Our approach goes beyond shaping mathematicians, aiming to cultivate a love of maths.

Our goal is to nurture adaptable, confident learners who not only excel academically but also contribute meaningfully to society. Through a focus on resilience, we aim to empower students to face challenges with confidence and adaptability, fostering lifelong learners.