

## **Curriculum Intent**

A high-quality mathematics education provides a foundation for understanding the world, the ability to reason mathematically and a sense of enjoyment and curiosity about the subject. We aim for all children to develop a love of mathematics by making maths more meaningful so that they understand how they can use it in the future. At Apley, we believe that Maths is an interconnected subject where pupils can make links and connections across different mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly difficult problems.

At Apley, our aim is to ensure that pupils know and remember more and have a secure mathematical understanding through embedding declarative (know that – relates to the facts and rules of maths), procedural (know how – relates to methods and sequences of steps) and conditional (know when – relates the problem solving and reasoning) knowledge. The expectation is that the majority of pupils will move through each year group following the programmes of study that are age-related, at the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Our Maths curriculum focuses on giving the children opportunities to overlearn throughout the year and ensure that they become fluent mathematicians. Within our planning, we provide a mastery curriculum that allows all children opportunities to reason and problem solve through a range of carefully planned and resourced learning experiences depending on the individual needs of the children in the class. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding through additional support and practice and timely, targeted interventions.

## **Curriculum Implementation**

At Apley, we aim to enthuse children in order to develop their thirst for mathematical knowledge. We do this by teaching mathematics through real-life contexts and providing frequent opportunities to problem solve and reason across the curriculum. Children have the opportunity to apply maths knowledge and skills across a range of other subject areas as maths is intertwined throughout the whole curriculum at Apley. Children study mathematics daily covering a broad and balanced mathematical curriculum including elements of number, calculation, fractions, geometry, measures and statistics. We follow the White Rose scheme of work and use the White Rose progression document to ensure our lessons are appropriate for our learners. We also ensure that all children will be able to develop their fluency in Maths through a daily 5 minute fluency starter when they develop speed and precision within number and the four operations. We focus not only on the mathematical methods, but we also focus on mathematical vocabulary as this is crucial to develop children's understanding. This is done through high expectations of vocabulary being used throughout teaching. It will be assessed using start and end of topic vocabulary assessments. Our sequences of learning are based on overlearning which ensure that children regularly revisit concepts over the year and within the key stage, we use Flashback Four to support with this. This provides the children with a deeper understanding of key mathematical concepts. Within our planning, our aim is that children are taught through using a range of concrete, pictorial and abstract resources to secure and embed mathematical knowledge and concepts. Our calculation policy underpins how and when we teach methods across the school.

Within EYFS, children are taught maths through a systematic approach where each number is introduced through a number of the week format. Children are taught maths daily through a combination of whole class activities, adult-led focus tasks and solo adult directed tasks. In addition to this, opportunities for maths challenges are available in our continuous provision, which children access on a daily basis in independent learning time.

We aim for each child to be confident in each yearly objective and develop their ability to use this knowledge to develop a greater depth understanding to solve varied fluency problems as well as problem solving and reasoning questions. Within each unit of maths work we develop problem solving skills by providing the children with an extended problem solving experience.

Children in Year 1 to Year 5 complete their homework activities using the online homework resource MyMaths, which aims to build pupil engagement and consolidate maths knowledge. Year 6 complete homework using CGP workbooks. EYFS home-school links are fostered through weekly maths homework which is typically a range of open-ended challenges linked to the taught sessions that week.

Ensuring that children are secure with number bonds and multiplication tables is a fundamental part of our maths curriculum. All children, starting from year 2, will be baselined at the start of their year group and half-termly

assessments will be used to identify gaps in children's times tables knowledge. To support the children with their multiplication practice and number bonds, we use 'Times Table Rockstars' and 'Numbots' as an online and fun learning platform which also offers resources to be used in the classroom.

### **Curriculum Impact**

Throughout each lesson, formative assessment takes place and feedback is given to the children through written or verbal feedback, close the gap and extension tasks. Gaps within lessons are closed quickly through targeted interventions. Teachers then use their assessment for learning judgements to influence their planning and ensure they are providing a mathematics curriculum that will allow each child to progress. The teaching of maths is also monitored on a termly basis through book scrutinies, learning walks or pupil voice activities. At the end of each unit, children are assessed based on the objectives that they have covered. Gaps and misconceptions can then be addressed in follow up lesson if needed. In EYFS, observations and assessments are completed regularly throughout the week. Each term children from Year 1 and above complete a summative assessment to help them to develop their testing approach and demonstrate their understanding of the topics covered. All children will use NFER papers and Year 2 and Year 6 will also use previous SATs papers. The results from both the formative assessment and summative assessment is then used to determine children's progress and attainment.