



Inspiring a love for lifelong learning
Mathematics Intent, Implementation and Impact Overview

At APPS, we recognise the importance of mathematics in the lives of our pupils as children and in their future lives. We provide our pupils with stimulating and challenging mathematical opportunities through high-quality daily lessons that are adapted to suit the needs of every child. High quality teaching is fundamental in ensuring the excellent progress and attainment our children make through their mathematical journey from Reception to Year 6 enabling them to achieve their full potential. By adopting a mastery approach, it is the intention that all children, regardless of their starting point, will maximise their academic achievement and leave APPS with an appreciation and enthusiasm for mathematics, resulting in a lifelong positive relationship with number and problem-solving.

Within the timetable, we have dedicated time for the practice of arithmetic skills and mental maths strategies; number bonds and times tables. The NCETM Mastering Number Program in Reception, Year 1 and Year 2 further secures number knowledge across KS1, and is designed to reduce cognitive overload to enable our pupils to build upon their prior learning as they progress through KS2 and beyond. This is in addition to the daily 1-hour maths lesson.

Intent

Our aim at APPS is to provide children with a foundation for understanding number, reasoning, thinking logically and problem solving with resilience so that they are fully prepared for their secondary education and beyond. It is essential that these keystones of mathematics are embedded throughout all strands of the National Curriculum and that children leave Ashford Park with a wide range of happy and rich memories formed through interesting and exciting experiences.

We work hard to ensure that we deliver a high-quality maths curriculum, taught by highly-skilled and enthusiastic staff, which is challenging, enjoyable and inspiring. Using the mathematics mastery approach, we believe children can become confident, enthusiastic and inquisitive learners, who have secure mathematical foundations and an interest in self-improvement. We want our children to build on their prior knowledge and make rich connections across mathematical ideas to develop fluency, reasoning and competence in solving increasingly sophisticated problems. We intend to develop our children's ability to articulate, discuss and explain their thinking using appropriate mathematical vocabulary.



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By providing our children with a variety of opportunities to apply their mathematical knowledge and skills, we enable them to make connections to prior learning, spot trends and identify patterns. This application of solid mathematical understanding further enables APPS pupils to apply their mathematical knowledge to subjects in the broader curriculum such as science, design and technology, history and geography.

Implementation

The mathematics curriculum is led by the mathematics team who lead a regular programme of monitoring, evaluation and review. In order to support the quality and consistency of the teaching of maths, we follow the White Rose Mathematics Scheme (WRM). As cohorts change, we continue to refine the mathematics curriculum to ensure that we continue to provide an adaptive and ambitious learning experience for all of our children.

Our lessons are fun and relevant to the lives of our learners. They follow a cycle of planning, to ensure that we can evidence progress over short and long periods of time. Maths lessons are designed with a concrete, pictorial and abstract (CPA) approach, providing our pupils with the scaffolding required to access the learning at all levels. We place a large emphasis on pupil engagement and design lessons which involve all pupils using questioning and modelling at the centre of every lesson. High-quality teaching responds to the needs of children and teachers actively mark work during lessons in order to identify misconceptions early. This is a key focus to promote rapid progress along with the use of a whole class feed-forward form to inform next steps in planning and to identify pupils who may not be making the required progress to take part in our 'keep-up' sessions or guided support in class. Likewise, effective assessment for learning is used to identify children who require more challenge or further opportunities to embed concepts and application of knowledge. Staff receive regular professional development to ensure that they are skilled and confident in the teaching of maths through regular learning walks and CPD. At APPS, all children progress through the scheme at broadly the same pace. Where additional support and adaptive strategies are required, they are effective in ensuring that every pupil makes excellent progress from their individual starting point.

Pupils' attainment is assessed during lessons and through the use of the WRM end of unit assessments. Question-level analysis of tests informs future planning. At the end of the academic year, the children complete standardised tests so that teachers and leaders can be confident that our pupils continue to achieve in line with or above other pupils nationally. Pupil progress meetings are collaborative opportunities to discuss the progress of individual pupils so that teaching can be adapted and provision put in place to ensure that all pupils meet their potential.



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Impact

APPS children are confident and enthusiastic learners who talk articulately about their mathematics and are eager to further their learning in the next stages of their education. They become fluent, competent and efficient mathematicians with the ability to recall facts and procedures, including the rapid recollection of times tables with greater accuracy. The impact of 'mastery' and the emphasis on accurate use of mathematical language is evident during class and pupil discussions and our children have the mathematical language to be able to justify, reason and explain their answers. Through varied and frequent practice with increasingly complex problems over time, pupils have the conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. Children are able to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, developing an argument, justification or evidence using mathematical language. Through the application of mathematics in the wider curriculum, children are able to explore how and why key mathematics concepts are relevant in the wider world. The high-quality mathematical education pupils receive at APPS ensures that they continue to meet or exceed national averages, as well as enabling an increasing proportion of children to work at greater depth throughout the school.