Pye Green Academy

Mathematics Curriculum

Intent

At Pye Green Academy we are committed to ensuring that all of our pupils:

- become fluent in the fundamentals of mathematics
- are able to reason mathematically
- can solve problems by applying their knowledge in a range of contexts.

We are dedicated to enabling children to recognise the importance of mathematics in the wider world so that they are able to use their mathematical skills and knowledge confidently in a variety of situations in their lives.

We want all children to enjoy mathematics and to develop a deep and sustained conceptual understanding so that they can experience success in the subject. We aim for pupils to achieve mastery of mathematics by acquiring a deep, long-term, secure, and adaptable understanding of the subject. We seek to develop children's curiosity about the subject, as well as an appreciation of the beauty and power of mathematics.

Throughout school, we follow the National Curriculum and have tailored our school curriculum to meet the needs of all our learners. Regardless of their background, individual needs or ability, we ensure our pupils are inspired and supported with their learning. We believe that all pupils can succeed in mathematics. A positive teacher mind-set and strong subject knowledge are key to student success in mathematics. By building confidence, resilience and a passion for maths, we can show that whatever your prior experience or preconceptions, maths is an exciting adventure that everyone can enjoy, value and master!

Implementation

The content and principles of the Early Years Foundation Framework, 2014 National Curriculum and the Teaching for Mastery approach convey how mathematics is implemented at Pye Green Academy.

Maths lessons

All lessons are planned using the National Curriculum objectives. Year groups have a yearly overview of the areas of mathematics they will teach. Mathematics is taught coherently and sequentially in Years 1 to 6 using White Rose Maths schemes of learning. Units of learning are broken down into a series of small, connected

steps with each building on the children's prior learning. Each lesson focuses on one small step or a series of small steps. Consistency in teaching mathematics across the entire school is achieved by teachers planning and delivering lessons with the aid of high-quality and rich resources including: White Rose Maths materials and other mastery resources from NCETM and NRICH. Teachers plan and deliver lessons to address the needs of all pupils with the use of scaffolding, skilful questioning and carefully designed enriching activities.

Early Years

Pupils in the Early Years are prepared for the National Curriculum by developing a solid conceptual understanding of number, shape, space and measure. The Early Years Foundation Framework is used to guide mathematical learning in the Nursery and Reception classes.

Concrete, Pictorial Abstract Approach

Learning throughout the school is introduced using a concrete, pictorial and abstract approach so that pupils develop a conceptual understanding of mathematics through a variety of manipulatives and representations.

Challenge and Support

The vast majority of pupils progress through the programmes of study at broadly the same pace. Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts. Pupils who grasp concepts rapidly are challenged by being offered rich and sophisticated problems before any acceleration to new content. Those who are not sufficiently fluent with earlier material consolidate their understanding, including through additional practice, before moving on. Teachers aim to rapidly address gaps in children's understanding within the lesson and through targeted intervention outside of the lesson.

Rapid Recall of Facts

Children, parents and teachers have regular access to TT Rockstars and Numbots to help every child from Foundation to Year 6 achieve the "triple win" of understanding, recall and fluency in mental addition, subtraction, multiplication and division - a fundamental part of the curriculum. In addition to this, pupils engage in Fast Maths 4 times a week, which enables them to learn key facts to aid fluency in calculations.

Marking and Feedback

Pupils receive frequent feedback in line with our whole school policy. Feedback celebrates successes and identifies key skills for development.

Impact

The impact of our Mathematics curriculum is shown through pupils' engagement, progress, sustained learning and transferrable skills. Children approach mathematical study with confidence and enthusiasm, and resilience. Approach and response to reasoning activities should improve term on term, with the expectation that by the end of the year, children are happy to accurately define and use mathematical vocabulary introduced by their teacher, as well as complete stem sentences to complete mathematical statements or reasoning. Pupils develop a wide variety of knowledge and skills and, as a result, achieve their potential. The majority of our pupils achieve Age Related Expectations (ARE) for their year group; some progress further and achieve Greater Depth (GDS). We ensure pupils have the opportunity to progress from their personal starting points and provide appropriate support and intervention for those who have gaps in their knowledge and skills. By the time Pye Green children leave year 6, we expect they will have confidence in their ability to do well, to have an appreciation of the beauty and power of mathematics and a sense of enjoyment and curiosity about the subject.