

Maths

Intent

As Edsger W. Dijkstra once said, 'There should be no such thing as boring maths.' Here at Blackford, we understand and value the importance of Mathematics. We intend for our children to be able to understand the world of Maths, have the ability to reason mathematically and to have a sense of enjoyment and curiosity about the subject through a mastery approach, where all children are challenged and encouraged to excel in maths. By adopting a Mastery approach following White Rose Maths, it is also intended that all children, regardless of their starting point, will maximise their academic achievement and leave Blackford with an appreciation and enthusiasm for Maths, resulting in a lifelong positive relationship with number. We want our pupils to have the ability to solve problems, to reason, to think logically and to work systematically. New mathematical concepts are introduced using a 'Concrete, Pictorial and Abstract' approach; enabling all children to experience hands-on learning when discovering new mathematical topics, and allows them to have clear models and images to aid their understanding.

We aim for all pupils to:

- become fluent in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- solve problems by applying their mathematics to a variety of problems with increasing complexity, including in unfamiliar contexts and to model real-life scenarios
- reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.
- have an appreciation of number and number operations, which enables mental calculations and written procedures to be performed efficiently, fluently and accurately to be successful in mathematics.

Implementation

Planning: Lessons are planned and sequenced so that new knowledge and skills build on what has been taught before. Teachers follow the White Rose Maths materials which allows children to develop their knowledge of a given skill through varied fluency, reasoning and problem solving. Staff also use the White Rose Calculation Policy when teaching formal methods, understanding that sometimes children find their own efficient methods along the way. In years 2-6 children also have access to Times Table Rockstars to build their fluency in their times table recall. Children enjoy weekly challenges, competing against other pupils (and teachers) and strive to improve their time and score each week.

Teaching: At Blackford, we exclusively use White Rose Maths this is a **mastery approach** to maths which encourages in-depth coverage of concepts over the year and over the school life of the children. It also enables the opportunity for children to learn and develop their mathematical skills and competencies, both individually and collaboratively. The main aim of all lessons is to develop children's knowledge, understanding and skills, applying these to a variety of contexts. Children have a variety of resources readily available should they need them throughout the lesson. We assess children in a variety of ways both formatively and summatively and continuously monitor to ensure all children make good progress.



The key features of Maths Mastery are:

- high expectations for every child
- every child has the opportunity to access given objectives no matter of ability
- push for greater depth
- number sense and place value come first
- focus on mathematical thinking and language with children confident to say what they are doing and why.
- using concrete apparatus and resources to support learning where appropriate
- reasoning and problem solving are central to learning

Resources: Each class has an appropriate range of resources to support learning in maths. These are easily accessible for the children so that they can lead their own learning. We use both the indoors and outdoors to teach maths.

Impact

As a results of our Maths teaching at Blackford and by the end of KS2 we aim for children to be fluent in the fundamentals of mathematics with a conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. They should have the skills to solve problems by applying their mathematics to a variety of situations with increasing complexity, including in unfamiliar contexts and to model real-life scenarios. Children will be able to reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language. Children show confidence in believing that they will achieve and that they feel ready for their next journey into KS3.

*Curriculum Overviews for each year group can be found on the school website.