

Mathematics Curriculum Statement

2020 - 2021

Intent

The 2014 National Curriculum for Maths aims to ensure that all children:

- become fluent in the fundamentals of Mathematics
- are able to reason mathematically
- can apply their maths skills to Science and other subjects
- can solve problems by applying their Mathematics

At Alverton, these skills are embedded within Maths lessons and developed consistently over time. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and relevance of Mathematics in all areas of life.

Following our return to school in September 2020, we have needed to respond to the enforced absence due to the Covid-19 pandemic. Initial assessments have identified priority pupils and we have timetabled additional Basic Skills sessions to allow us to focus on our identified priorities, as well as increasing the focus on "gaps" during Maths lessons.

Implementation

The content and principles underpinning the 2014 Mathematics curriculum and the Maths curriculum at Alverton reflect the demand of the curriculum at different points in a child's education. Therefore, throughout Key Stage 1 and Lower Key Stage 2, a mastery approach is adopted with an early emphasis on the use of concrete and pictorial manipulatives; this introduces children to, and consolidates, concepts that will be invaluable in their maths journey. In Upper Key Stage 2, children are placed in ability groups to allow them to be taught at a pace that matches their current ability. Children in the same year group will all study the same curriculum, but some may move through it more quickly and receive a greater degree of challenge whereas others may move more steadily with more reinforcement of basic principles. Over Years 5 and 6, the curriculum follows blocked spiral approach with much more opportunity for revisiting concepts taught earlier in the phase.

Our approach at all points throughout the school are characterised by:

- Teachers reinforcing an expectation that all children are capable of achieving high standards in Mathematics.
- The large majority of children in a class or group progressing through the curriculum content at the same pace.
- Those children who encounter a barrier to learning receiving intervention and support in understanding that concept as soon as possible.
- Differentiation is achieved by emphasising deep knowledge and through individual support and intervention.
- Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons and resources to foster deep conceptual and procedural knowledge.
- Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts.

- Teachers use precise questioning in class to test conceptual and procedural knowledge and assess children regularly to identify those requiring intervention, so that the majority of children keep up.

To facilitate consistent teaching in the different phases, the school uses a combination of White Rose and Hamilton Trust planning and the school's ongoing engagement with the DFE funded Maths Hubs programme continues to ensure that the relevant staff understand the pedagogy of the approach. Lessons always combine an element of fluency practice, a guided teaching time which introduces the objective to be studied that day and independent consolidation time where the new learning can be fully assimilated and deepened. In Key Stage 1, new ideas are almost always presented with objects (concrete manipulatives) for children to use. Children may also use manipulatives in Key Stage 2 and teachers use careful questions to draw out children's discussions and misconceptions. Mathematical topics are taught in blocks, to enable the achievement of 'mastery' over time. Each lesson phase provides the means to achieve greater depth, with more able children being offered rich and sophisticated problems, as well as exploratory, investigative tasks, within the lesson as appropriate.

Since our return to school in September 2020, we have introduced extra Basic Skills sessions to provide increased opportunities to focus on age-appropriate key skills in arithmetic, such as times tables, as well as enabling us to revisit and / or cover objectives from previous years as necessary.

We are also providing teacher-led 1:1 intervention for Maths in Year 6. In all other year groups, additional time / sessions / support staff are used to increase the frequency of Maths interventions.

Please see the EYFS Intent statement for how mathematics is implemented in the EYFS.

Impact

The school has a supportive ethos and our approaches support the children in developing their confidence and independent skills, as well as empathy and the need to recognise the achievement of others. Children can underperform in Mathematics because they think they cannot do it or are not naturally good at it. At Alverton, we address these preconceptions by ensuring that all children experience challenge and success in Mathematics. We believe that for all children, particularly those who do not identify as mathematicians, a firm understanding of place value, number and calculation strategy are the vital foundations that allow confidence to grow and the ability to challenge oneself to flourish. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child. These factors ensure that we are able to maintain high standards, with achievement at the end of KS2 well above the national average and a very high proportion of children demonstrating greater depth.

Following Covid-19, we will continue with our existing range of assessments ensuring, in particular, that regular assessment in relation to intervention ensures that these are accurately focused on the correct pupils, enabling maximum progress to be made.