Mathematics at Clifton Primary School

INTENT –

At Clifton Primary School, we understand that mathematics is essential to everyday life, critical to science, technology and engineering. We want our curriculum to provide: a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. We want our children to have a positive attitude towards mathematics and to help them become independent, confident, inquisitive and creative learners. We believe that children should be provided with meaningful contexts for their mathematical work linking, where possible, to everyday life and situations. We want them to be able to apply their mathematics across the curriculum and have a deep understanding, so that future learning continues to build on solid foundations.

In line with the National Curriculum, we aim that all children:

Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

Be able to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.

Be able to solve problems by applying their mathematics, to a variety of problems with increasing difficulty, including in real-life situations and unfamiliar contexts. Breaking down problems into simpler steps and persevering in looking for different solutions.

IMPLEMENTATION –

At Clifton Primary School, we use planning from the Primary Lancashire Maths Team as a guide to when to teach key objectives in the mathematics curriculum.

Early Years - Our Mathematics curriculum incorporates learning through play, learning by adults modelling, by observing each other and through guided learning and direct teaching. Mathematics is split up into two areas: Number and Numerical Patterns.

In years 1, 2, 3, 4 and 5 teachers use the 'Red Rose Mastery Mathematics Scheme' to deliver a daily mathematics lesson. This mastery in maths approach places emphasis on the progressive mastery of essential knowledge and skills in mathematics. It embeds a deeper understanding of maths by applying a concrete, pictorial, abstract approach so that pupils understand what they are doing, rather than just learning to repeat routines without grasping what is happening.

The whole class moves through the topics at broadly the same pace. Each topic is studied in depth, as the children move towards a secure understanding of the mathematical concepts. Our children are given time to think deeply about the maths and really understand it at a relational level, rather than a set of rules and procedures. We offer all pupils access to the full maths curriculum. We feel that this inclusive approach and its emphasis on promoting multiple methods of solving a problem, builds self-confidence and resilience in pupils. Differentiation is provided within the lesson, pupils who grasp concepts quickly are challenged with rich and sophisticated problems within the topic. Those children who are not sufficiently fluent are provided additional support to consolidate their understanding before moving on.

Year 6 also teach in line with the mastery approach and use additional resources. Year 6 will begin the 'Red Rose Mastery Mathematics Scheme' in September 2023.

We ensure that mathematics is taught using a wide array of maths resources to aid and support our children in their learning. Mathematics is widely promoted across the school and throughout the whole curriculum and opportunities to extend and promote mathematics are sought. Precise mathematical vocabulary is used and misconceptions discussed to ensure children understand the terminology.

Within the lessons there are ample opportunities for discussions between teacher and children, discussions between children (talk partners), group activities, individual work practical work, investigative work, practice of basic skills and routines.

IMPACT–

As a result of our mathematics curriculum, we aim for our children to display a positive and resilient attitude towards mathematics, who will enjoy their maths and understand the relevance of what they are learning. They will show evidence of fluency, reasoning and problem solving in their work. Our children will be able to select appropriate equipment and strategies to solve problems and will articulate their reasoning through verbal, pictorial or written forms. They will be able to recall the appropriate number facts for their year group and they will not fear 'getting answers wrong' because they will understand that this is all part of the learning process.

Standards are tracked and monitored to ensure all children make good progress and attainment in relation to the mathematics Early Learning Goals and the National Curriculum programme of study. Staff will collect evidence through observing pupils, questioning, giving feedback, assessments and revision of planning. School leaders, including the governors, will regularly review the curriculum and the impact of any improvement initiatives.