**Intent**

Mathematics is a highly connected subject, which is needed to competently function in society. Children’s chances of success are maximised if they develop deep and lasting understanding of mathematical procedures and concepts. Therefore, the Mathematics curriculum at Flixton Primary School reflects the understanding that mathematical literacy is important for all pupils to possess and apply.

Mathematical understanding is at the core of every Maths lesson and is achieved through the use of concrete manipulatives and pictorial images. Within lessons, the onus placed on procedure and fluency is there to help build foundations and free working memory. Through mathematical talk, children will develop the ability to articulate, discuss and explain their thinking. A typical maths lesson will aim to provide the opportunity for all children, regardless of their ability, to work through fluency and reasoning challenges.

**Excellence in mathematics is typified by:**

* Enthusiastic and confident mathematicians who demonstrate conceptual as well as procedural understanding, making connections within mathematics, with other subjects and with real life.
* Children who are curious and imaginative, and have the initiative to solve problems independently.
* Children who demonstrate high levels of engagement and persevere when faced with mathematical challenges.
* Children who reason, generalise and make sense of solutions when investigating mathematically.
* Children who are able to see mistakes as a way of increasing learning opportunities.
* Children who demonstrate high levels of fluency in performing written and mental calculations and mathematical techniques in a variety of contexts.
* Children who use mathematical language in mathematical discussions.
* Children who have the confidence and enthusiasm to initiate and to engage in purposeful mathematical discussion.
* Children who are be able to speak confidently sharing their mathematical reasoning.

**Implementation**

Using the National Curriculum and the Statutory Framework for the Early Years Foundation Stage as a guiding document, a consistent and progressive framework is in place from EYFS, KS1, LKS2 and UKS2, using the programmes of study from each mathematical area. Across the school, we use quality guidance and resources from White Rose, who are inspired and informed by robust, world-class research and global maths experts. In order to ensure progression and consistency, teachers use the Flixton Primary School Maths Overviews (Appendix 1) which link closely to the White Rose Programmes of Study. These overviews identify key fluency objectives for their year group, progressive steps across key concepts and opportunities for inspirational maths ideas. To support planning, teachers are signposted to NCETM (National Centre for Excellence in the Teaching of Mathematics), White Rose, You Cubed, Jo Boaler, Nrich and maths.co.uk.

In Early Years, to support the FPS Maths Overviews, teachers also use the Nursery and Reception Progression Steps for Mathematics document (Appendix 2), the Early Childhood Maths Group resources (Appendix 3) and Birth to 5 Matters (Appendix 4).

We recognise the importance of being fluent in the fundamentals of mathematics, including varied and frequent practice, so pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. At FPS we do this by identifying key fluency objectives for each year group, having a fluency focused lesson each week from year 1 and monitoring impact with micro assessments on maths.co.uk half termly. One aspect of fluency is times tables, we ensure rigour with a non-negotiable times table teaching programme (Appendix 5).

We aim for children to be inspired by maths, show enthusiasm for learning and grow their mathematical mindsets. We do this by threading inspirational maths opportunities through our curriculum. This challenges children to utilise their problem solving skills in unfamiliar contexts, thus developing their mathematical understanding, fluency and resilience.

The NCETM Ready to Progress documents are used in Year 2 – 6 as teachers see fit. They can be used as assessments at the beginning of the year to check that children have secured the learning from the previous year, or they can be split and used prior to teaching a new concept (Appendix 6 – Ready To Progress).

We encourage our pupils to explore, discover, analyse and apply mathematics, using a cyclical concrete, pictorial and abstract approach to lessons (Appendix 7 – Calculation Policies). Teaching techniques and strategies utilise all modes of learning, including integrating maths across the curriculum, with specific, progressive links being made in Design and Technology (Appendix 8 - Progression in Design), Science and Geography (Appendix 9 - Progression in Statistics).

**Impact**

The impact of this policy on outcomes for children is measured against our Excellence Statements for Maths.

 The Maths subject leader monitors the impact of this policy through:

-       Book scrutiny

-       Pupil interview / survey

-       Data analysis

-       Teacher interview / survey

Leadership team monitoring is also fed to the Maths lead.