Maths at Highgate.

Intent.

The aims of teaching and learning mathematics are to encourage and enable students to recognise that mathematics permeates the world around us. From being submersed in it in Foundation stage, where maths underpins so many of the free flow activities in a real life context: baking, waterplay, home corners, shops, game playing. To developing confidence and understanding of basic number skills that make every day life easier. Developing an enthusiasm for learning by ensuring children understand it is a skill that they will have with them for life and be something they use when they leave school, when they do their shopping, bake cakes or meals with their own families, when they are building and decorating a home of their own.

We want to instil a confidence in maths learning that abolishes the 'well I was never any good at maths' culture that follows many children into adulthood and repeats the cycle.

The intent of our Mathematics curriculum is to deliver a curriculum which is accessible to all and that will maximise the outcomes for every child so that they know more, remember more and understand more. As a result of this they will

- **Make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.**
- **Be able to apply their mathematical knowledge to science and other subjects.**
- **Realise that mathematics has been developed over centuries, providing the solution to some of history's most intriguing problems.**
- **Know that it is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment.**
- **Understand the world, have the ability to reason mathematically.**

Our inclusive approach.

We want all children at Highgate to feel confident in their learning of maths and feel lessons need to be inclusive and accessible to all. We develop a strong use of the Concrete, Pictorial, Abstract structure- providing children with a wide range of manipulatives to use to develop their conceptual understanding and confidence in maths before they are ready to progress to pictorial representations, then moving on when and if ready, to the understanding of abstract concepts. Our aim is for children to recognise the connections between the three and use them to develop their own confidence, understanding and mathematical journey.

We want all our children to leave Highgate having developed the belief that maths is fun, maths is doable, maths is accessible to everyone.

Quality of Education (Implementation)

We have adopted the Ark Curriculum to develop a knowledge rich and cumulative curriculum that helps learners to develop mathematical oracy and problem solving and make connections between different mathematical concepts. It encourages retrieving, using and applying concepts regularly and transferring to new contexts as this helps develop fluency as well as conceptual understanding.

Teachers deliver a daily one hour maths lesson and also allow 15 minutes three times a week for a 'Maths Meeting' to visit any topics they feel relevant.

Throughout these sessions we focus on applying understanding from previous lessons, enhancing our use and understanding of key mathematical vocabulary and developing new learning through practical tasks and the development of opportunities to talk through and reason problems.

Our Mastery Curriculum seeks to develop the use of accurate and high quality mathematical language because pupils are actively encouraged to articulate, justify and explain their thinking, both as individuals and in groups. Lessons provide opportunities to explore, investigate and debate ideas using objects and images, and pupils will be enabled to make meaningful connections in mathematics.

Our Mastery Curriculum is underpinned by 3 dimensions of depth: Conceptual Understanding, Language and Communication and Mathematical Thinking and these are evident through:

- **A cumulative curriculum that builds upon learning, allowing pupils to make deep connections across topics**
- **Use of multiple representations throughout to strengthen conceptual understanding**
- **Emphasis on learning, and confidently using language to communicate mathematical problems**
- **Use of careful questioning to encourage students to build mathematical habits of mind**

Impact

In maths, it is expected that evidence of the children's study will be recorded in books which can include the work, or photographs of the work they produce each lesson and through responses to high quality marking that challenges or targets misconceptions.

In maths, we will assess pupils' work using termly moderation with year group partner teachers, a combination of teacher assessment and formal termly assessments which are recorded on a pupil tracker, enabling us to monitor individual pupil progress. Attainment of each child will be recorded as working towards, working at or working beyond their year group's expectations.

In addition, we measure impact of mathematics through:

- **lesson observations – how well children are learning and how they explain mathematical understanding;**
- **learning walks – how well the curriculum intent is embedded**
- **book looks – as part of triangulation with learning walks and assessments**
- **pupil voice – enables us to listen to pupils' views about their learning and how well curriculum content is taught and understood;**
- **assessment data tracking by the mathematics subject leader**